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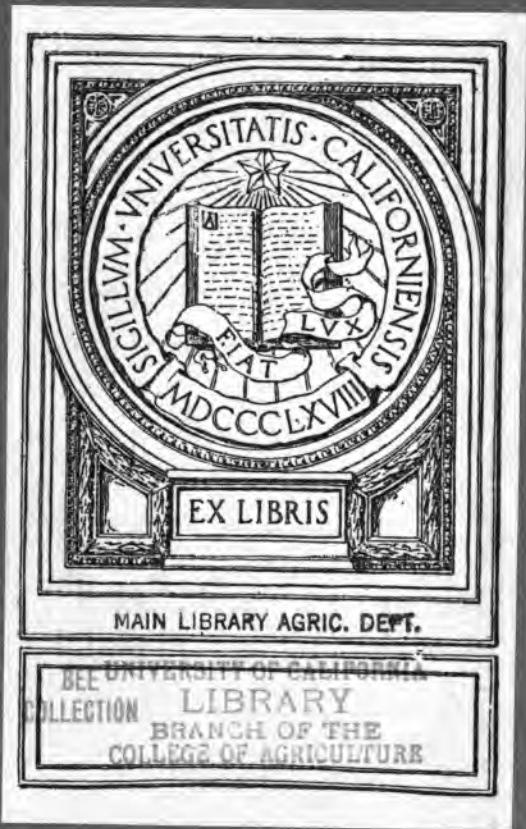
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UC-NRLF



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1904 Lacking in our SF 521
Fred A Parker N3 8.



ANNUAL REPORT
of the
GENERAL MANAGER

of the UNIVERSITY OF CALIFORNIA
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COLLEGE OF AGRICULTURE

NATIONAL
BEE-KEEPERS'
ASSOCIATION

And Report of the
NATIONAL CONVENTION

1904



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SF521
N3
1904

ANNUAL REPORT
OF THE
GENERAL MANAGER
FOR 1904.

CASES THAT HAVE COME BEFORE THE ASSOCIATION
IN THE PAST YEAR.

Dec. 28, 1903—ADULTURATED HONEY.

Sent \$100 to help enforce Colorado Food law. As yet nothing accomplished.

Jan. 28—ADULTERATION.

Business man of Straughn, Ind., several times complained of adulterated honey sold on his market. I had suspected samples analyzed, found to be pure honey, simply granulated.

ADULTERATION.

Clifton Springs, N. Y., March 10, 1908.

Friend France: The suppression of adulteration is a question that puzzles statesmen, and the cost staggers empires. Too much cannot be expected of the National Association. In your correspondence on this subject I believe you would be justified in saying, that it is the secondary object of the Association and the intention, as far as its limited means will permit, of the Board of Directors to aid in the enforcement of laws against the adulter-

ation of honey, providing such law or laws are not weak and faulty, but such aid must necessarily be limited. The Association must not be expected to neglect or jeopardize the prime object of the Association, "to protect and defend its members in their lawful rights, 'or to prosecute violators of such adulteration laws at its own expense, nor bear the burden of such enforcement. The prosecution of the violation of such laws, with attendant cost, is a matter for the proper State officials and the State. The Association can undoubtedly in most of cases enforce such laws by compelling the proper State officials whose duty it is to enforce such laws, to do their duty. This would be the first move of this Association in States having suitable laws and it should not let up on said officials until every honorable means to that end has been exhausted. It can aid by securing samples in a lawful manner, of suspected articles, having them analyzed and if adulterated

furnish corroborative, if not direct, evidence of such laws. It can aid in other ways by placing a limited amount of funds in the hands of a responsible State Bee-Keepers' Association, that is a member of the National, or a committee appointed for the purpose by said State Association, to be used in any lawful way that will aid in accomplishing the desired result. This Association will not aid in the enforcement of any adulteration law that the Directors are reasonably satisfied was enacted by the legislature with the idea that such law or laws would be enforced at the expense of the National Bee-Keepers' Association without expense to the State. Neither will it aid in the enforcement of any adulteration law that does not have some financial backing and support from the state of which it is a law. Yours truly,

W. F. MARKS.

Feb. 15—ALFALFA BLIGHT.

Wabuska, Nevada. Several farmers claim bees the cause of the alfalfa leaf blight. Case investigated. To several parties, I sent our leaflet on Bees & Horticulture. No farther complaints from there.

1903—STOLEN HONEY.

At Bakersfield, Cal., a quantity of extracted honey in cases was stolen, and with much difficulty it was found under a ranch cabin floor. Three guilty parties in jail for trial, broke jail—later captured; trial and sentenced to jail.

July 3.

Asks aid from Association; suits and expenses heavy. Case submitted to Directors. Reply:—

BURGLARY AND ITS PROSECUTION.

In order that you may better understand each other, perhaps I would be justified in saying that it appears to be the prevailing opinion of a majority of the Directors that it is not the object,

expressed or implied, of the Association to aid the several States and Provinces to prosecute their burglars and thieves. The law in criminal cases is well defined in every community. Any member who may suffer loss by theft has the wealth and power of the commonwealth behind him. It is the duty of the commonwealth to detect, prosecute and punish criminals. It is one of the very things government is for. All citizens are equally interested in the suppression of crime, and they elect prosecuting officers for that very purpose. The district attorney can employ assistance, if necessary, in the prosecution of criminals at public expense, and the sheriff can, if necessary, call every person of the commonwealth to his assistance, at public expense, to capture such criminals. It is unnecessary that any individual citizen should assume personal expense or liabilities in such cases.

In view of these and other reasons given sustaining their position, but not enumerated here, the majority were of the opinion that they would not be justified in rendering any financial aid in such cases, and it would establish a dangerous precedent for them to do so.

W. F. MARKS,
March 16, 1904. Chairman.

\$14 FOR QUEENS.

Bakersfield, Cal. A member of N. B. K. A. sent money for queens and fails to get either queens or money returned. Private and not of general interest to the Association.

March 5—POISON SPRAYING.

A member at Groton, N. Y., complains of 3,000 fruit trees being sprayed with poison; last year killed many bees. Several copies of "Bees and Horticulture" sent. 1904, no spraying done during open bloom. New York law strict on such spraying.

March 3—BEES SPOT CLOTHES.

Brantford, Ont. Complaint to city,

asking to have bees removed, which are 25 feet away. Owner joins Association. Justice decides bees are not a nuisance in this case.

March 16—SPITE NOT BEES.

Freeville, N. Y. Party asked to pay rent of house, returns the same with complaint of bees a nuisance. Beekeeper finally settles by giving \$25 present to get rid of bad neighbors.

FIRE, 60 STANDS BURNED.

Bakersfield, Cal. Jeweler sets fire to back yard, fire spreads and burns up 60 hives of bees. Above refuses to pay any damages. Long lawsuit follows to July 25. Judgment against party who places his property in other hands. Loaned our member \$15 on suit until same collected.

ILL-FEELING.

In 1903 trouble between parties and bees complained of. Renewed February 28, March 17 and April 21. Several letters written to both parties. For present case is dropped. Proctor Knott, Minn.

March 14—PEAR BLIGHT.

Paonia, Cal. Complaint the bees cause and spread blight on the pear trees, also alfalfa leaves. New 1904 book "What courts say" sent to complaining parties, proving their mistakes.

CITY ORDINANCE.

Buffalo, N. Y. Complaint that an apiary hemmed in by factories and residences, guilty of spotting clothes on wash lines. Health Commissioner orders the bees removed in 30 days. There being unfriendly feelings, I ordered our member O. L. Hershiser of the same city to in some way secure settlement without lawsuits. He spent several days' time on the case, and settled July 25. Fees \$25.

SPRAY CALENDAR.

National Fruit Grower, of St. Joseph, Mich., publishes a spray cal-

endar, with no mention not to spray during open bloom. Several beekeepers complain of same.

May 16—POISON SPRAYING.

New Castle, Colo. In 1903 spraying killed many bees in apiary of 100 colonies.

May 14, August 15—SALE TO COLLECT.

Tulare, Cal. In 1903 over 30,000 lbs. comb honey sent to be sold on commission. Gets part pay but cannot all. Asks N. B. K. A. to help collect. Company send check to balance account but short weight, in report.

May 27, August 8—To COLLECT.

Albia, Iowa. Honey left in store to sell. Store sold and soon after fire burns store. Settlement promised.

May 37—MOVE BEES.

Vernal, Utah. Complaint of an apiary near several neighbors, and owner has plenty of land bees can be moved. Asked to do so.

May 28—TOO MANY BEES.

Rocky Ford, Colo. One of our members looks over pastures and buys where few bees are near. Those few near complain he is on their pasture. Each land owner can keep bees or stock if he chooses. Not likely a beekeeper will settle where pasture, is overstocked.

BEES BURNED ON TREE. SPITE.

Elmira, N. Y. Near city neighbors, easily differ. Complaint to city bees spot clothes and sting people. Asks to be removed. June 6 sent "What courts say." City Health Commissioner decides not to interfere. In few days later bees swarm and cluster on neighbor's tree. Land owner burns bees on tree, refuses beekeeper to get the bees. Law suit follows. Asks N. B. K. A. to defend beekeeper.

June 11—ORDINANCE.

Central Lake, Mich. In 1903 complaint of bees to village. Ordinance passed to remove bees out of village.

Ill feelings bottom of trouble. A high board fence is erected to force bees above neighbor's house. Fence obstructs view down town. Renewed complaint and village prosecute beekeeper for violating the Ordinance. Sent Director Hutchinson to investigate case, secure legal help and defend case. July 3, suit won. Total costs \$59.07 allowing nothing for time of Mr. Hutchinson, several days. August 4 complaint again, Defendant fined \$20.00. Appeal taken to circuit court. Suit will come off in October. Best to be good neighbors, bees not to blame.

ACCOUNT TO COLLECT.

Titusville, Florida. Shipment of honey to Boston, \$125. Partly paid. Asks N. B. K. A. to help collect. Parties written to June 11. Paid July 1.

POOR CHECK.

California member sells \$115 beeswax, gets check but cannot get it cashed. Private, not for the National to settle.

June 17—JOIN AFTER IN TROUBLE.

Racine, Wis. Sends dues and in same letter asks if bees few feet from neighbor must be removed. Advised if possible to move bees and save trouble; sure to follow if bees remain.

June 21—BEES STOLEN, CHICAGO.

Owner leaves bees on city lot and goes away. Boys steal a few swarms in hives. Parties said to have stolen bees claim they can prove were home the entire evening. Boys for fun, did it.

TO COLLECT.

Milledgeville, Ill. 1903 crop honey sent to dealer. Cannot get pay. I wrote and found honey not yet sold, 34 crates.

July 1—ORDINANCE.

Medina, N. Y. Neighbor girl stung, face badly swollen. Bee-keeper offers \$15 as damages. Party refuses, demands bees moved. Owner joins N

B. K. A. I wrote City Clerk, asking careful investigation. Aldermen decide not to interfere. July 5.

ORDINANCE.

Riverside, Cal. Complaint, the bees damage fruit in orchards, vineyards, and around the fruit dryers.

BEES AND FRUIT.

Pasadena, Cal. July 18, claim bees damage fruit, when bees cannot make living on natural flora. Many letters written to check legal proceedings.

July 4—COAL TAR.

Marshfield, Wis. Complaint neighbor intends to use coal tar paint on barn near apiary. Asks the neighbor to have painting delayed until cool weather, so as not to endanger the bees. I knew of no damage from coal tar fumes. Had used it in hives to keep out ants.

July 20—CHICKENS STUNG.

Oak Park, Ill. Apiary moved and caused bees to become cross, also bees go to the chickens' water dishes and sting them. Sent "What courts say."

CITY BEES.

Neighbor lady is stung, is very sick; also man with ulcerated tooth is stung on jaw, has it lanced. Ask City Hazelton, Iowa, to pass Ordinance. "What courts say" and letters sent to interested parties.

July 25—NUISANCE, LOS ANGELES.

District Attorney declares that said bees roam around highway and people's premises, also are an obstruction to free use of property, as to interfere with enjoyment of life and property by entire neighborhood. To remove, discontinue and abate said nuisance within reasonable time. August 22, suit won after long trial. Neighbors as witnesses claim no damages.

July 4—FIRE, LOSS \$235.

Neighbor sets fire to brush and burns 71 stands, bees located on non-resident land. Squatting right. Offered to

settle for \$100. Party paid same and was donated choice case comb honey, separated good friends. In law the owner of bees was a trespasser where the bees were, and not entitled to damages. Yet this party was liable for damages by fire. A wise settlement.

August 6—HONEY LOST.

Mineral, Texas. \$15 valuation of honey lost in train wreck. Sent claim of damages to railroad company.

August 10—ORDINANCE.

Kirkwood, Ill.—The keeping of more than five hives of bees upon any lot, block or parcel of land in the village is a nuisance. Violation, \$3 a day. Case not yet settled, Sept 6.

\$105 DEBT.

Norwalk, Cal. Sent honey to be sold and contracted same when sold to pay debt first. August 15 settlement will be given.

September 3—STEALING BEES.

Braidwood, Ill. Five hives of bees were stolen, asks for advice. State laws define what to do; also penalties.

September 3—CIDER MILL.

Bishop, Ohio. A cider mill 30 yards from an apiary. Can the owner be made to screen the mill. Donate some honey and in friendly way show him the damage to the bees, also danger of poisoning the cider.

TO THE CITY BEE-KEEPER.

There are many keeping bees in the suburbs of cities, whose bees are an annoyance to neighbors.

1. SPOTTING CLOTHES.

This is generally worst the day bees are set out on summer stands. Bees go only short distances on that date. It is best not to set the bees out on wash-days but the day following; by next week the trouble will be over. If they must be set out and if it is wash-day, go to the neighbor who is washing, explain the situation and offer a present of some honey if they will delay washing one day.

2. AT WATERING PLACES.

Always provide abundance of water in places for bees. Shallow wooden dishes with sloping sides, with a slatted board float, is a good form of watering dish. Somewhere have some salt, also air-slacked lime where bees can go to. There is something about it bees like, and it will save trouble to supply the bees' demands. If your bees bother a neighbor's pump, go and put a piece of cheese cloth over the spout and fence the bees out as well as providing a strainer for the water. Stock tanks are places of annoyance. Just above the water line on outside of the tank fasten a 3-inch strip; it will not bother the stock, and will keep the bees from going there. Also see to it that the overflow is so arranged as not to make a mud hole near the tank.

3. IN THE NEIGHBORS' GARDEN OR FIELD.

If your neighbor or his horse are stung by your bees in his garden or field, I find it a good plan to donate some honey, at same time ask him to do such work on cool days or early mornings. If he is unable to keep the ground clean, then some early morning surprise him by taking your own horse and cultivate for him up to breakfast. Generally one such act will establish such good feelings no farther trouble will arise. I have proven it so.

4. AT GROCERY STORES AND RESIDENCES IN FALL.

After the honey season, bees often are a great annoyance at above places especially in empty sugar and syrup barrels, and candy shops. Go to those places and ask to place the packages where the bees cannot get to them. Go to sugar cane mills and keep the premises cleaned up, and to neighbors' kitchens where bees come in and bother while canning fruit, and ask them to keep doors and windows screened while at such work. Bees do not go where no sweets abound.

5. IN THE HIGHWAY AND PUBLIC PLACES.

If people and teams are stung in such public places by your bees, it is your duty to so locate the bees, or change the surroundings that they do not disturb the public. If damage to person, stock or property is done, by the bees, the owner is liable for damages. And if it continues, may become a nuisance. High board fences, or high hedges are a great help. Even with all possible precaution if bees are near the street, the bees at times will bother. Keep out of trouble if possible. Don't get the idea that the National Association can win every case. You must keep within the law if you need protection. Avoid conflicts, compromise and live up to the GOLDEN RULE.

N. E. FRANCE,
General Manager of National Association.

CITY BEE-KEEPING.

The greater part of the troubles of our members comes from the city bee-keeper. The bees spot clothing in the spring, bother around the various watering places, sting neighbors in their gardens and in public highways. Many times the little neighborly differences are allowed to become great barriers between parties, and as a result in come the bees as a nuisance. If the bee-keeper had donated some choice honey in the best of friendly feeling, and made special effort to be neighborly, no trouble would have come. I do not feel like defending a member who is not willing to make

sacrifice to neighbors near an apiary, for certain that neighbor is bothered more or less with the bees. And when asked by neighbor to in some way avoid farther trouble, to reply in defiant way "I belong to the National Bee-keepers' Association, what can you do?" There are great responsibilities ahead for the Association, not in defending such members, but in mutual help. Better let the funds be used to advertise the value of pure honey as food and where to get it, and thus help to create a market and sell at more uniform price, avoiding the overstocking of some markets when others are short. Supplies can be purchased in quantities at reduced rates, each member getting his profits, according to his order. Laws to suppress diseases of bees obtained by union. During 1904 I have spent fully six months' hard labor for the members of the Association, settling personal troubles, where the bee-keeper was much at fault. It is not the boy's wages I get for the same that I am after, but hope the members will let up on this line of duties and branch out on the prosecuting of honey adulterations, creating better markets, and in some systematic way marketing what each member cannot sell in his home market. We used to all pay \$1 dues, but now the greater portion come in at half rate through their local association. This doubles the number of members to defend, and work of the General Manager, without salary in proportion.

OUR MOTTO.
Progress and Friendship.



Constitution of the National Bee-Keepers' Association.

ARTICLE I.—NAME.

This organization shall be known as The National Bee-keepers' Association.

ARTICLE II.—OBJECTS.

Its objects shall be to promote the interests of bee-keepers; to protect and defend its members in their lawful rights; and to enforce laws against the adulteration of honey.

ARTICLE III.—MEMBERSHIP.

SEC. 1—Any person who is interested in bee-keeping and in accord with the purpose and aim of this Association, may become a member by the payment of one dollar annually to the General Manager or Secretary; and said membership shall expire at the end of one year from the time of said payment, except as provided in Sec. 10 of Article V of this Constitution. Any person may become an Honorary Member by a two-thirds vote of all the members present at any annual meeting of this Association. No member who is in arrears for dues, as shown by the books of the General Manager, shall

be eligible to any office in this Association; if such disqualification occur during the term of any officer, the office shall at once become vacant.

SEC. 2.—Whenever a local bee-keepers' association shall decide to unite with this Association as a body, it will be received upon payment by the local secretary of fifty cents per member per annum to the General Manager.

ARTICLE IV—OFFICERS.

SEC. 1—The officers of this Association shall be a General Manager, a President, a Vice-President and a Secretary, whose term of office shall be for one year; and a board of twelve Directors, whose term of office shall be four years, or until their successors shall be elected.

SEC. 2—The President, Vice President, Secretary and General Manager shall be elected by ballot during the month of November of each year, by a plurality vote of the members, and assume the duties of their respective offices on the first of January succeeding their election.

SEC. 3.—The President, Vice-President, Secretary and General Manager shall constitute the Executive Committee.

SEC. 4—The Directors to succeed the three whose term of office expires each year shall be elected by ballot during the month of November of each year, by a plurality vote of the members. The three candidates receiving the greatest number of votes shall be elected, and assume the duties of their office on the first of January succeeding their election. The Board of Directors shall prescribe how all votes of the members shall be taken, and said Board may also prescribe equitable rules and regulations governing nominations for the several offices.

ARTICE V.—DUTIES OF OFFICERS.

SEC. 1.—President.—It shall be the duty of the President to preside at the annual meeting of the Association and to perform such other duties as may devolve upon the presiding officer.

SEC. 2.—Vice-President.—In the absence of the President, the Vice-President shall perform the duties of President.

SEC. 3—It shall be the duty of the Secretary to keep a record of the proceedings of the annual meetings; to receive membership fees; give a receipt for the same, and turn all moneys received over to the Treasurer of the Association with names and postoffice addresses of those who become members: to make an annual report of all moneys received and paid over by him, which report shall be published with the annual report of the General Manager, and to perform such other duties as may be required of him by the Association; and he shall receive such sums for his services as may be granted by the Board of Directors.

SEC. 4—General Manager.—The General Manager shall be Secretary of the Board of Directors and Treasurer of the Association; he shall receive

membership fees, giving a receipt therefor; he shall keep a list of names of the members with their postoffice addresses; he shall notify each member of the time of the expiration of his membership at least 30 days before said membership expires, and ask for a renewal of said membership.

SEC. 5—Whenever one or more amendments of this constitution have been proposed as provided in Art. IV., it shall be the duty of the General Manager to submit the proposed amendment or amendments to a vote of the members at the time of the next annual election of officers, for adoption or rejection.

SEC. 6—At the time for sending the ballots to the members for the annual election, the General Manager shall also send to each member a list of the names of all the members, and an itemized statement of all receipts and expenditures of the funds of the Association by the Board of Directors and a report of the work done by the said Board of Directors.

SEC. 7—The General Manager shall give a bond in such amount, and with such conditions as may be required and approved by the Board of Directors, for the faithful performance of his duties, and perform such services as may be required of him by the Board of Directors or by this Constitution.

SEC. 8—The Board of Directors shall pay the General Manager such sum for his services as said Board may deem proper, but not to exceed 20 per cent of the receipts of the Association. And the said Board of Directors shall have power to remove from office the General Manager, for any cause they deem sufficient, and fill the vacancy until the next annual election.

SEC. 9—The said Board shall choose its own chairman and shall meet at such time and place as it shall decide upon, and shall determine what course

shall be taken by the Association upon any subject presented to it for consideration, that does not conflict with this Constitution, and cause such extra but equal assessments to be made on each member as may become necessary, giving the reason to each member why such assessment is required; provided that not more than one assessment shall be made in any one year, and not to an amount exceeding the annual membership fee, without a majority vote of all the members of the Association.

SEC. 10.—Any member refusing or neglecting to pay said assessment as required by the Board of Directors shall forfeit his membership, and his right to become a member of the Association, for one year after said assessment becomes due.

ARTICLE VI.—FUNDS.

The funds of this Association may be used for any purpose that the Board of Directors may consider for the interest of its members, and for the advancement of the pursuit of bee-culture.

ARTICLE VII—VACANCIES.

Any resignation of a member of the Board of Directors shall be tendered to the Executive Committee. Any resignation of a member of the Executive Committee shall be tendered to the Board of Directors.

ARTICLE VIII.—MEETINGS.

This Association shall hold annual meetings at such time and place as shall be agreed upon by the Executive Committee, who shall give at least 60 days notice in the bee-periodicals of the time and place of meeting.

ARTICLE IX—AMENDMENTS.

This Constitution may be amended by a majority vote of all the members voting, providing such proposed amendment has been approved by a majority vote of the members present at the last annual meeting of the Association, and copies of the proposed amendment, printed or written shall have been mailed to each member by the General Manager at least 45 days before the annual election.



FINANCIAL STATEMENT OF THE TREASURER

TO SEPTEMBER 6, 1904.

RECEIPTS.

1903.

Dec. 3	Balance on hand.	\$1,115 08
1904.		
Sept. 6	Dues from members, and advertising in 1903 Report.....	672 00

EXPENDITURES.

1903.

Dec. 3	Express on honey for analysis.....	\$ 50
18	Postage	2 00
23	Annual Report 1903, voting ballots.....	160 50
25	Express, Report copy...	40
26	Freight on 340 Annual Reports to me.....	77
28	To J. U. Harris, Colorado Food Law.....	100 00
30	Postage.....	2 00
31	Postage.....	2 00
31	Honey analysis, Wm. Selser, Philadelphia.....	75

1904.

Jan. 29	1000 stamped 2c envelopes and 500 1c.	27 25
29	1500 postal receipt blanks.....	17 00
Feb. 22	Dr. Miller counting votes, Dec. 31.....	3 00
Feb. 22	4,000 letter head, 2,500 printed envelopes, postage and express on part to Directors.....	32 50
22	Express to General Manager.....	1 10
29	1,000 Renewal blanks, New York Horse law suit, J. W. Pierson.....	55 00
Mar. 16	500 envelopes printed.....	5 60
24	Postage	2 00
May 7	Postage \$2, dispatch delivery 25c.....	2 25
June 4	Postage	3 50
6	2,550 copies "What Courts Say".....	76 30
27	Postage and express on Reports.....	85
July 3	Dispatch from Redlands, Cal.....	25
3	Special delivery, 6 letters to Redlands.....	60
4	Car fare two trips, W. Z. Hutchinson, suit Doty...	37 61
4	Attorney fees, Doty case.....	21 46
4	Printing cards for advertising in 1904 Report.....	2 50
8	Iron safe for members, records, etc.....	1 50
I9	2,000 crop report return cards printed.....	44 00
25	Loan on suit, B. P. Shirk, Panford, Cal.....	15 00
25	O. L. Hershisher, fees settling Buffalo case.....	25 00
Aug. 6	Dispatch	50
Sept. 6	Balance on hand to date.....	1,136 89

\$1,787 07 \$1,787 08

Yours truly,
N. E. FRANCE.

Members of the National Bee-Keepers' Association.

NAME	TOWN	No. Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
ALABAMA						
Cutts J M	Montgomery	270	2500			9000
Simmons Eli A	Ft Deposit	90			700	400
ALASKA						
Lawson Wm	Treadwell					
ARIZONA						
Applebee W	Tempe	400			10680	5760
Archbald G H	Tempe					
Adams E M	Tempe					
Austin L C	Tempe					
Austin W S	Tempe	135			3200	
Benson N	Buckeye	200				3000
Broomell C A	Phoenix					
Bulkley Mrs Ralph	Owens					
Cave & Frizzell	Tempe					
Day O R	Phoenix					
Dolson H F	Phoenix				12480	
Doner Wm	Phoenix	180				4080
Fisher Theo	Tempe					
Green H A	Phoenix	90				2000
Hadsell B A	Buckeye					
Harper Samuel	Phoenix					
Hill C R	Tempe					
Hoover J B	Phoenix	250				10000
Ivy J P	Phoenix					
Johnson J W	Tempe					
Lisonbee J T	Mesa					
Lossing Wm	Phoenix	1100	2000	3000	1600	32000
Meyer M H	Tempe					
Moore H B	Tempe					
Morse J L	Phoenix					
Nippert John	Phoenix	600				13200
Redden L E	Tempe	240				3000
Redden Mark	Tempe	110				
Rohrig Wm	Tempe					
Rohrig Martin	Tempe					
Ruse E	Tempe					
Short T L	Phoenix					

NAME	TOWN	No Colonies	COMB	EXTRATED
			White	Amber
Wall M C	Phoenix	1100		8000 1600
Weisner Philip	Mesa			
ARKANSAS				
Alexander J B	Lecont	92	1500	500
Bayne A S	Clarendon			
Campbell S M	Mountainburg			
Zeiner J H	Bard			
CALIFORNIA				
Abbott O L	Selma	400		2000
Aiken Wm C	Los Angeles			
Allen Wm H	Santa Paula	800		
Amos Edward C	Los Angeles			
Andrews T O	Rincon	300		
Andrews L L	Carona	200		1000
Archibald E	Los Angeles			
Arundell T F	Fillmore	600		
Atmore Frank E	Sespe	100		
Avery Mrs Mary E	Hemet			
Bachtel I C	Eagleville			
Baker J D	West Butte	900		20000
Bannister L H	Pasadena			
Barden R B	San Marcos			
Barnett T M	Burbank	40		
Barnett Allen	Whittier			
Barringer T J	Tulare	31		250
Barrett T M	Burbank			
Beckwith C A	Lompoc			
Bell Oregon	Norwalk			
Bennerscheidt H	Anaheim			
Bennett B S K	Los Angeles			
Benson N R	Rialto	150		
Bishop Roy K	Orange			
Blake N A	Pasadena	150		
Bland A B	Fernando			
Bohnert Frank	Rialto			
Bone J A	Pylema			
Bonfoey E	Corona			
Bowen J J	Fresno			
Briggs W P	Whittier			
Britten F H	Visalia			
Brodbeck Geo W	Los Angeles			
Brown H C	Tulare			
Brown F E	Hanford	100		1600
Brown Chas D	Newcastle			
Brown J F	Hanford			
Buckheim F F	Santa Ana			

NAME	TOWN	No Colonies	COMB	EXTRACTED
			White	Amber
Brown J W	Los Angeles			
Buckheim Frank S	Santa Ana			
Burdick B G	Redlands			
Camp Wm	Hanford			
Carmichael A O	Tulare	350		
Carpenter A B	Poplar	112		4000
Carpenter J W	Fallbrook	300		
Carr Verron	Garvanza			
Carter K	Riverside			
Carville Jefferson	Riverside			
Chalker J R	Long Beach	60		2000
Chamberlain V	Santa Ana			
Chantry Mrs I A	Whittier			
Chrisman H T	Kearney Park			
Clayton C H	Los Angeles	75		
Clute Elmer	Guernsey			
Cock L A	Tustin			
Cochens N	Fernando			
Campton Charles J	Temescal			
Connelly T F A	Bishop			
Cook A J	Claremont			
Cooper J H	Nordhoff	935		
Cooper G M	Monrovia			
Corey John G	Santa Paula			
Crane A J	Chino			
Crowder John F	Selma			
Daugherty Chas	Lemoor	80		2000
Davis J L	Ramona			
Dawson L H	Corona	32		
Decker C K	Angiola			
Delaney Dennis	Bishop	150	7000	3000
Delano J A	Los Angeles			
Dixon Galen J	Bishop	250	12000	3000
Doane Isaac	Whittier			
Dontaville Wallace	Pasadena	200		
Dyre J C	Sanger			
Eaine Walter M	Julian			
Elser F U	Los Angeles	56		
Emerson Bros	Santa Ana	1000		9000
Epperson R L	Fresno	620		28000
Ercanbrack C K	Watsonville			
Fassel Frank C	Riverside	300		3000
Ferguson S C	San Bernardino			
Ferree J W	Los Angeles	300		
Flehardt J N	Hanford	140		660
Fletcher G L	Hanford			800
Flint J L	Selma			

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Flodene K A	Hanford					
Florey Isaac	Guernsey	60				2000
Flory Joseph	Guernsey	115				2500
Flory C F	Lemoore	375				2000
Flory J F	Lemoore					
Forst F	Elmanta					
French W D	San Diego					
Frickey W A	Bishop					
Funk D C	Upland	110				2000
Garnett M H	Visalia	100				
Gaunt J P	Armona					
George J M	Perris	250				1800
Gerbeck E G	Fort Jones					
Goetting A A	El Casco	150				
Gossman Dr	Ludwig Gravanza					
Graves G R	Ontario					
Green J A	Lemoore					
Griffeth Wm	Perris					
Griffin J W	Los Angeles					
Grigsby M G	Redlands					
Griswold J C	Hanford					
Griswold A E	Hanford					
Gurr A R	Meroed	300	6000	6000		
Hamabaugh J M	San Marcos					
Hammond C W	Hanford	70				4000
Harbison J S	San Diego	300				
Harrison Arthur	Guernsey					
Harris Haum	Visalia	150				
Hart F M	Hanford	700				35000
Hart E	Pasadena					
Hatch W W	Iomosa	325				
Hauser John	Acton	350				
Heidorn Henry	Grangeville					
Herron R B	San Bernardino					
Hesse A J	Merced					
Higgins D A	Fallbrook					
Higgins Mrs D A	Fallbrook					
Hilderbrand W H	Guernsey					
Holley R A	Sespe	425				
Holt John	Los Angeles					
Honey E A	Orange	175				
Hoover S F	Tulare					
Hoover E G	Tulare	250			4000	3000
Hornback James	San Jacinto	145				
Hunter W B	Riverside	225				
Hyde R	Visalia					
James Janes	Los Angeles					

NAME	TOWN	No Colonies	COMB	EXTRACTED	
			White	Amber	White
Johnston J P	Fresno				
Jordan E F	Upland	90			800
Kalfus J W	San Luis	66			
Kelley S G	Santa Barbara				
Kemble E H	Tulare	100			3000
Knapp A	Tulare				
Kimball J W T	Santa Ana				
Kuehne M R	Pomona	285	120		1200
Kuehne John W	Pomona				
Lauritzen Ernest	Fallbrook	165			
Lawless B F	Visalia				
Leeper Grant	Visalia				
Lehman Herman	Santa Monica	550			
LeSueur Philip	Calabras	90			
Lewis R L	Hemet				
Leifer Henry	Monrovia				
Lillbridge Chas E	Carona	125			
Lowe F D	Bakersfield				
Ludhorf Otto	Visalia	86			
Lux Henry	Encinitas	200			
Lux Peter	Encinitas	300			
Lynn L F	Los Angeles				
McCarroll W J	Tropico				
McClure, Jno	Los Angeles				
McCubbons J C	Reedley	250	800	800	20000
McGinnis T C	Hardwick				4000
McIntyre J F	Ventura	800		Fed 5 tons	
McNay Frank	Redlands				
McNeal N	Visalia				
Macdonald D	Beaumont				
Maples John	Woodville				
Masten J A	Carona	300			
Maynard Dr L C	Prospect Park	100			
Maynard M	Prospect Park				
Mendleson M H	Ventura	1700			
Merriam G F	San Marcos	200		feeding	
Mercer L E	Ventura				
Metcalf C	Los Angeles				
Mills T H	Fowler				
Miller J H	Garvanza	400		feeding	
Miller G O	Filtrerton				
Mills G W	Tulare				
Moffatt Joseph	Los Angeles				
Moffett T J	Sherman				
Moore Geo W	Tres Pinos				
Moore E S	Tres Pinos				
Mul H	Los Angeles				

NAME	TOWN	No Colonies	COME		EXTRACTED	
			White	Amber	White	Amber
Muth-Rasmussen Wm	Independence	200	8000			
Naylor F K	Newhall					
Newton L	Corona					
Nutter Horace G	Covina	150				feeding
Oakes John	Whittier	435				
Odell J A	Long Beach					
Orderlin J A	Santa Ana					
Orvis Fred	Fallbrook					
Otto Henry	Vala Vista	205				feeding
Paine Walter	Julian	75				
Park Thos	Corona					
Parker F A	Lompoc					
Parr Wm	Visalia					
Pease John A	Monrovia	100				
Peck W J	Menzana					
Peterson James	Corning	140	200	800		200
Planchon J P	Glendora					
Pleasants J E	Santa Ana	75				
Price M D	Aroyo Grande	135				1560
Prior Philip	San Franscisco	17	300	427		
Pritchard S H	Los Angeles					
Reed A	Bishop					
Reed Wm	Whittier					
Rees Carey W	Berkley	25				
Reeder J C	Ontario	100	50			2000
Rich G W	Armona					
Richardson W T	Moorpark					
Rosebrock W H	Hornbrook	86	1500			
Ross Wm	Nordhoff					
Rowley Geo W	Hollywood	240				
Rozell Albert	Los Angeles	290				
Sanders Miss Maud	Riverside	120				
Sargent F P	San Bernardino					
Shrock C B	Riverside	200				
Schubert Chas C	Corona	200				
Scott John L	Sunland	70				
Seligman A	Los Angeles					
Sharpless C W	Whittier	120	100	50		
Sheld Iner	Rincon					
Shirk B P	Hanford					
Sibert Geo	Highland Park	250				
Sigrist John	Santa Monica					
Slayton H C	Lang	150				feeding
Smale Ernest J	Palms					
Small Mary L	Palms					
Smith A W H	Tinemaha					
Smith A P	Big Pine	70	2000	1000		

NAME	TOWN	No Colonies	COMB	EXTRACTED	
			White	Amber	White
Smith D K	Pico Heights				
Smith J P	Garvanza	34			
Snow Laurin	Sespe	100			
Spencer R M	Nordhoff	600			
Spurlin A F	Rosedale	800			25640
Steel Geo E	E Los Angeles				
Stockdill Geo H	Lake City				
Stromeyer Fritz	Thebe				
Stubblefield G S	University Station	400			
Sweeney J H	Iramosa	265			
Taylor O	Harlem				
Teachout F G	Larvanza				
Thompson J H	Upland				
Tompson C W	Tulare				
True Frank	Santa Ana				
Tyler J P	Los Angeles				
Trickey W A	Bishop	300	14000	2000	
Unterkircher Albert	Riverside	170			2200
Utterback B A	Hanford				700
Vandall B C	Sur				
Varner W W	Santa Paula				
Vaughan O E	Round Valley				
Wagner A F	Meglegrove				
Walker J E	Tulare	180			9000
Wawley G M	El Cajon				
Weeks G W	Carter Oaks				
Weilman Thomas	Bardsdale	170			
Wegener Mrs Louis	Alhambra				
Wegener Capt G P	Alhambra	400			
Weir W J	Hanford				
Wheeler J N	Lemoore				
White Nellie M	Los Angeles				
Wilder H E	Riverside	140			
Wilkinson W W	Candon				
Wilke F G	Los Angeles				
Williamson J K	Redlands				
Wilms John C	Valleyvista	190			1140
Wilson W M	Visalia				9000
Winter Chas	Bishop	220	12000		
Wood Delos	Santa Barbara	95			
Wood Geo M	San Fernando	80		feeding	
Woodberry G B	Glendale	100			
Woods W R	Garvanza				
Wright Alex	Fullerton				
Yandell J N	Bishop				
Yearnshaw R H	Walnut Grove	100	750	1500	400

NAME	TOWN	No Colonies	COMB White Amber	EXTRACTED White Amber
CANADA				
Allen Francis A	Ottawa	15		700 700
Armstrong James	Cheapside			
Bomber David	Shallow Lake			
Bowling Wm	Stratford	52		3000
Brown W J	Pendleton	100	300	2500
Button Wm	Ringwood			
Byer J L	Markham	180		10000 1000
Chisholm C F	Wallbridge	75		3700 3000
Chrysler W A	Chatham	44	300	1200
Comire Dr A O	St Francois du Lac	55	150	1000
Cooper F	Stouffville	6		
Craig W S	Brantford			
Darling J K	Almonte	80		200
Davison John F	Unionville			
Dickerson E	N Glanford			
Dougall T J	Stouffville			
Edmondson Chris	Brantford	96		1000 2000
Evans J D	Islington	100		2000
Fixter John	Ottawa			
Gemmill F A	Stratford			
Hall J B	Woodstock	200		7100
Heaslip W	Odessa	150		7000
Heise D W	Bethesda	40		1500
Holmes M B	Athens	70		3900
Holt James E	Newton Robinson	70	600	5700
Holterman R F	Brantford	364		9000 10000
Jens F A	Melville	150		9000 2000
Johnstone M	Brentwood	50	300	200 1000 500
Lee W G	Addison			
Lott B O	Anson			
Lott F A	Spring Brook	40		4000
McEvoy Wm	Woodburn			
McEvoy J	Woodburn	188		9000
McFarlane D	Tilsonburg			
McGinnis James	Fergusonvale	15		500 100
Manning E	Blantyre	75		3000
Mark S	Little Britton			
Marshall W H	Binbrook			
Martin James	Hillsdale	65	100	5000
Miller F J	London	270		12000
Morrison J C	Guthrie	13	1200	
Munro P	Shallow Lake			
Newton Jno	Thamesford	140	2700	300
Nolan Dennis	Newton Robinson			
Patterson R L	Lynden	30		
Pedlow H	Caledonia	75		6000

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Pedlow R	Jarvis					
Pettit Morley	Belmont					
Post C W	Trenton					
Roberts H T	McIntyre					
Rudd Mrs	South London					
Salisbury E J	Moira	85			3300	
Shaver J H	Cainsville	54			1100	
Sparling J W	Bowmanville					
Stead R J	Lanark	34			2500	
Strong Thomas	Brantford					
Switzer J F	Orangeville	80	1500	500	3000	1000
Taylor Alex	Paris	160				2500
Timbers John	Cherry Wood	120			1500	1500
Trinder Ed	Simcoe	29				
Walterhouse J H	Toronto					
Webster W H	Oakwood	70			3250	
West John	Thornton	70	147		2000	
White F E	Invermay					
Wilson W L	Elmvale					
Wilson C H	Hawkeston		100		700	
Winger Jesse	Carrville	60			8000	
Wood Geo	Wesley	162			4000	1000
Wood Samuel	Nottawa	65			3000	800

COLORADO

Adams Charles	Greeley					
Adams J B	Longmont	81		2400	200	
Aikin R C	Loveland	800	30000		15000	
Arens A E	Broomfield					
Bennett T J	Platteville	90		3120		
Bishop W	Rocky Ford					
Booth Levy	Denver					
Booth Mrs M A	Denver					
Brace W A	Longmont					
Brock Mrs L J	Longmont					
Bruce J S	Montrose	500	1000	3000		
Calhann J	Brighton					
Cheek & Willinger	Las Animas					
Collins W P	Boulder					
Colman W E	Broomfield					
Cook Susie R	Littleton					
Cornelius J	Sterling	800	12000			
Crawford Harry	Broomfield					
Darnell W O	New Windsor					
Devinnny U	Edgewater					
Dodds Casson	New Windsor					
Dodds J B	Edgewater					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Drexel Frank H	Crawford	500	24500			
Evans Emma E	Denver					
Evans W C	Ft Collins					
Foster A F	Boulder					
Francis Seph	Erie	375	24600			
Gill M A	Longmont	1060	70000		3000	
Gray W P	Brighton					
Green J A	Grand Junction	220	4000		8000	
Griffith Thos	Granda	300	8400			
Hackney J W	Orchard	140	4000		5000	
Hall Wm	Ft Collins					
Harris J U	Grand Junction					
Harvey M W	Montrose	400	9600	4800		1000
Hickox W	Berthoud	1200				
Hubbard H S	Denver					
Hunt F H	Denver					
Hurst A	Denver	100	500	1000		
Hutchins L A	Denver					
Jouno L F	Denver					
Knowles G W	Meeker	100	5000	1000	1000	2000
Large Philip	Longmont	500	30000		1000	
Lindenmeir Caroline	Ft Collins					
Lindza W G	Broomfield					
Lyon J E	Longmont					
McDermont J B	Denver					
Mallory F W	Antlers	55	1320		120	150
Martin John A	Paonia					
Martin John I	Paonia					
Miller L W	Oaks					
Miller J Roscoe	Montrose	160	2000	2500	2000	3000
Millson E	Denver					
Moon C E	Broomfield					
Moon D	Golden					
Morehouse H C	Boulder					
Morrisman M H	New Windsor					
Morse J H	Broomfield					
Noel C	Harman					
Parson A S	Rocky Ford	435	10000	7000	3000	8000
Perry E F	Denver					
Pollock C G	Berthoud					
Porter W L	Denver					
Porter Mary C	Denver					
Pryor J E	Plateau City	400	24000			
Rauchfuss Frank	Denver					
Rauchfuss H	Denver					
Read Elizabeth F	Arvada					
Rising S C	Berthoud					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	Amber	White
Smith O P	Broomfield					
Stimson C	Amity	6				400
Stowe Fred L	Denver					
Sweatland H H	Brush	52				2500
Taylor Joe	New Castle	117		2500		
Thompson F L	Denver					
Whipple W W	Harris					
Wick Fred	Broomfield					
Williams Jos	Golden					
Willis R D	Montrose	400		9600		7000
Wilson A G	Longmont	125		12500		
Wingard G W	Boulder					
CONNECTICUT						
Coley H W	Westport	175		2000		2000
Gilmore Frank	Watertown	20		900		
Lathrop W W	Bridgeport	2			64	
DELAWARE						
Gilfillian Rev Joel	Newark	7		250		50
DISTRICT OF COLUMBIA						
Benton Frank	Washington					
Nash F P	Washington					
FLORIDA						
Benecke Henry	Titusville	66				2000
Brown A F	Bulow	500				
Case J B	Port Orange	125		1000	1000	400
Harris C S	Holly Hill	55				
Hart W S	Hawks Park					
Hill H E	Fort Pierce					
Poppleton O O	Stuart	265			250	5000
FOREIGN						
Nordling Ed	Havana Cuba					
Pain W H	Honolulu H I					
GEORGIA						
Clute Herbert	Leslie					
IDAHO						
Atwater E F	Boise	400		12000		8000
Beidler Wm E	Parma	60		2000	400	400
Bradshan	Payette					
Brooks Walter	Caldwell					
Brush G H	Roswell					
Cottingham F G	Nampa					
Cree J H	Payette					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
DeClerque T C	Middleton	40	1000			
Ehlers L	Notus					
Fouch F R	Parma	150	5000		2000	
Frost C W	Payette	600	20000			
Gaise Otto	Notus	255	6000	1000	4000	
Gorrie Norval	Wieser					
Hansen Arthur	Lewiston					
Jenny Kasper	Boise					
McClanahan A J.	Payette					
McCormick R R	Roswell					
Mason C	Caldwell	20	150			
Mitchell Mrs S A	Parma					
Morris Mrs Bertha	Parma					
Myers C G	Caldwell					
Paine Benjamin	Roswell					
Paul Mrs A A	Parma	100	3500	500		
Peck L W	Roswell					
Petersen Miss Bertha	Notus					
Robertson H W	Roswell					
Ross W H	Roswell					
Ruddock W H	Roswell	60	1000			
Russell W J	Payette					
Schenck Miss Ida	Caldwell	20	140	85		
Sholtz W F	Roswell					
Trout J H	Roswell					
Wright M H	Rock Creek					
Yoder J R	Meridian	140	5000		5000	

ILLINOIS

Archard Chas B	Roselle	10	300		
Affolten Geo S	Maywood				
Almond Bros	Libertyville				
Arnd H M	Wheaton				
Arnold F X	Deerplain	190	200	500	2000
Atkins M M	St Charles				
Baldwin A Y	DeKalb	61			
Barkemeyer B D	Oak Park				
Barr Lester	Downers Grove				
Bartrum Mrs H W	Newark				
Baxter E J	Nauvoo	200		18000	
Beardsley E H	Chicago Lawn				
Becker Chas	Pleasant Plains	101	500	1500	
Bevier M	Bradford				
Biester Wm	Belvidere	17			
Black S H	Good Hope				
Black S N	Clayton				
Blume W B	Norwood Park				

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Blunier Peter	Roanoke	22	700		200	
Bodenschatz Adam	Lemont	200	400	200	1000	800
Bolt R	Fulton					
Boone E A	Shelbyville	12	274		300	
Boyd Albert	Gays	85	500	100	300	200
Boyden L W	Chicago					
Brown Frank	Chicago					
Burcham Chas	Mechanicsburg					
Burnett R A	Chicago					
Burr Leslie	Braceville					
Butler J M	Sherrard					
Cameron L A	Hoopeston	13	240			
Campbell Hugh B	Urbana					
Cave Geo W	Kirkwood	175	4000		1000	
Chapman W	Spring Valley	13	200	250		
Chapman W B	Chicago					
Cherry Thomas M	Quincy	18	250		50	
Clarke Chas	Chicago					
Clark E G	Homewood					
Colburn R J	Chicago					
Collins B F	Chenoa					
Cooley Stangton	Maywood	18	150		1200	
Copley Dr H	Joliet	45	500			
Coppin Mrs Aaron	Wenona	175	2000		500	
Coppin Aaron	Wenona					
Craven Harry W	Evanston					
Craven Thos	Seneca					
Crimm S T	Dawson	75	15000	1000	25	
Crotzer A S	Lena	19	300			
Culver Frank H	Lockport	24	200	250		
Cole John	Williamsfield	29	700	800		
Dadant C P	Hamilton	225		10000		
Davenport W C	Wilmette					
Deem B L	Colona					
Diebold A J	Seneca					
Dougherty Thomas	Princeton	32	660			
Dowdy John S	Atlanta	40	400			
Duby H S	St Anne	60				
Duff Peter N	Chicago					
Duffy H J	Sheridan					
Duncan Wm	Hinsdale					
Durham D L	Kankakee					
Dutnall Jno	Chicago					
Earnest D P	Comstock					
Eaton Dr E N	Chicago					
Elringer E	Wheaton					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Emigh Dr B T	Aurora					
Emmons A I	Greenfield					
England P J	Fancy Prairie					
English W M	Astoria					
Ewings M B	DeKalb					
Ferguson Geo E	Cordova					
Ferguson L R	Harvey					
Flanagan E T	Bellville	150				
Frank J C	Davis	140			4000	
Foster Uriah	Big Rock	20	200		200	
Freisl Raymond	Chicago					
Fluegge T	Bensonville	5	100			
Gamash Jas	Waukegan	6	500			
Gehrke H F	Arlington Heights					
Gibb Samuel	Raritan					
Gilbert L M	Naperville	7		60		140
Glasser Wm	Dakota	14	800	75		
Glesener Mrs John J	Chicago					
Green W W	Windsor Park					
Gross Jacob	Harvey					
Hagler H T	Virden	140	2400		1800	
Haines C A	E St Louis					
Haise Charles	Atlanta	32	900			
Hall B C	Elmwood	58	3000		1000	
Halovan T F	Reddick	13	250	250		
Hampton John	Macomb	38	600	200		
Handel C D	Savanna					
Hatch Harry R	Lisle	17		80	500	
Hawley Charles	Coolville	80	1000	500	380	150
Hayck B W	Quincy					
Hayck T H	Quincy					
Hays John	Macomb	125	2300	3000	200	
Helphrey Wm	Argenta	52	800	500		
Herbert John	Hampshire	18	100			
Herrick S H	Rockford	8	100		40	
Hettel Nathan	Marine	64				
Hiestand N A	Chicago	2	80			
Highbarger Leroy	Leaf River	20				
Hight J A	Chicago	60	950	300	218	180
Hight L	Braidwood	25				120
Hintz A J	Lemont	105			2000	
Hitt Samuel	Elizabeth	96	500	500	2000	
Hogge T E	Chicago					
Holdener J D	Carlyle					
Homan W A	Quincy	40				
Horack Rev Chas	Streator	10	100			1000
Horstman W H and wife	Chicago					

NAME	TOWN	No. Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Honser Arthur	Macomb	40	1000		1000	
Humpert G A	Pittsfield	30	500		1000	
Johnson J E	Williamsfield	34	800	700	300	400
Johnson Frank E	Galesburg	10			1000	
Johnston Ramey	Graymont					
Josephson A	Lockport					
Junod L A	Mulberry Grove	7	120		100	
Kellebew Ed L	Winchester	34	687			
Kannenberg C F	Oak Park	34	1800		200	
Karns Allen	Dawson					
Keeler W C	DeKalb	23		200		
Kellogg F E	Crystal Lake					
Kennedy B	Cherry Valley	80	1500			
Kennedy Miss L C	R R Curran	72	2500			
Kildow A L	Putnam	165	2709			
Kluck N A	McConnell	34	150		800	
Lawrence W G	Chadwick	56	1500	2000		
Lampman H	Rockton					
Lee Arthur	Rockton	134	1475	600	300	300
Lee H W	Pecatonica	160	1000			
Leiker Andrew	Joliet	16				
Luther C D	Rockford	7	100	50	100	50
Lind M H	Baders	86	2600		900	
Lindbloom C	Russell	6	60		75	50
Longsdon W J	Stillman Valley	150	1100		2000	
Longswell B R	Rochelle					
Lovejoy G A & Son	Moline	23	600			
Luxton J G	Lyndon	140			2000	2000
Lyman W C	Downers Grove					
Lynn Geo W	Lockport					
McBarnes W H	Rockford	50	500			
McCain R B	Coal City					
McCartney Geo	Rockford					
McDaniel D W	Hamilton					
McKeon Thomas	Chicago					
McLeod D C	Pana	61	2000		200	
McEwing M B	DeKalb	17	340			
Marshall Wm	DeKalb	65	350			
Martin M M	Caledonia	8	20			
Mason Joseph	Fairdale	20		50		175
Meise Fred A	Coatsburg	45	200		1000	
Meredith E K	Batavia					
Michael S P	Spring Valley	100	2000			
Miller Dr C C	Marengo					
Miller A J	Decatur	32	980			
Mills M E	Cerro Gordo	10	400			
Mohr Mike D	Hampton	25				

NAME	TOWN	No Colonies	CONB		EXTRACTED	
			White	Amber	White	Amber
Moore Herman and wife	Park Ridge					
Moore W B	Alton					
Morrison Guy	Greenup	82	1200	1500	100	300
Mottaz A	Utica	50			3700	
Muchleip H	Apple River	75	1400		1800	
Ness L L	Morris					
Niver S A	Chicago					
Norberg Peter J	Spring Valley	150	200		4000	
Null W D	LaHarpe	57			4200	
Nydegger John	Danyville	38			1200	
Opfer A H	Chicago					
Orchard Chas B	Roselle					
Osterman John	Cornland	44	250	250		
Owen Chas	Chicago	13	200	100	150	
Parker A R	Morrison					
Payne J W	Humrick					
Piercefield Wm	Stillman Valley	38			300	
Poindexter Jas	Bloomington	108	450			
Poindexter Geo	Kenney	60	1500			
Pottinger C W	Waldron	1				
Pressler E	Chicago					
Price D J	Ottawa					
Primm J W	Springfield					
Procise H P	Chrisman	62	1200			
Raferty J T	ElDora	50			1400	
Reeser N W	Geneseo					
Reynolds W G	Chicago					
Rice W G	Champaign					
Ricker T R	Cortland	115		1500		
Riley W	Breeds					
Rillebrew Edward L	Winchester					
Ritscher A E	Meredosia					
Robinson J M	Neponset	14	250	150		
Rogers F A Jr	Downers Grove					
Rosenberger Aug	Papineau	12	300			
Rothwell W A	Kishwaukee					
Russone G	Chicago					
Sarton P B	Glasgow					
Schmidt Mrs G A	Riverdale Station					
Schmertman Lewis	Freeport	26				490
Schoon John T	Urbana	34	300	500		
Scott W C	Athens					
Scroggins A C	Mt Pulaski	45	700	300		
Searl Joseph E	Vermont	70	2500			
Secor W G	Greenfield					
Settle W H	Gridley					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Sexton J G	Lyndon					
Seymour H S	Sugar Grove					
Shrontz Mack	Memence					
Sieber W J	Glencoe	6	56	84		
Siebold J	Horner					
Slack Geo B	Mapleton	15	300			
Smith Arthur A	Belvidere					
Smith J Q	Lincoln					
Smith J I	Lincoln					
Snell F A	Milledgeville	70			950	
Snethen A A	Pontiac					
Spieker Henry	Florence Station					
Stabeck T O E	Davis					
Stage W H	Dundee					
Stahmer Paul	Addison					
Stanley T C and Son	Fairfield					
Stanley Arthur	Dixon	250	500		2000	
Starkey E E	Evanston					
Steinmetz Fred	Bunker Hill					
Stewart W H H	Emerson					
Stone Jas A	Springfield	68	500	500	1500	1500
Stordock C H	Durand	110			5000	
Stowe Mrs N L	Evanston					
Swift E C	Ottawa					
Switzer Samuel	St Charles	29			700	
Taylor O	Harlem	73	800		100	
Thaxton T B	Glasgow	109	2000	1000	3000	1000
Thompson J E	Carpentersville	100			5000	
Thornton Jno A	Ursa					
Tough Jas	Oak Park					
Tredt Edwin F	Tredtville	100	2500		1500	
Turner W P	Peoria Heights	106	2000		600	
Tyler Fred	San Jose	20	300	24		800
Utermark Henry	Homewood					
Wagner F M	Quincy					
Wakeland P D	Hoopeston	9	50	75		
Walker Albert	Petersburg					
Walker Byron	Clyde					
Weckerle Mrs Anna	West Pullman	28	400		600	
Wellbrock C	Peoria	22	600		200	
Werner Louis	Edwardsville	160				
West Ephriam	Minooka					
Wheeler J C	Oak Park					
White M J	Lorretta	8	200	300		200
Whitmore N P	Gardner					
Wichert A	Mattison					
Wiegand A	Chicago	75				

NAME	TOWN	No Colonies	COMB		EXTRATED	
			White	Amber	White	Amber
Williams Edio	Dunnerferline					
Williams G E	Lexington					
Williams Geo R	Ottawa					
Wilson Emma	Marengo					
Whitney Bryon	Bryon					
Woods E D	Galesburg	75	1000		800	
York Mrs Geo W	Chicago					
York Geo W	Chicago					
Yueill Miss Minnie	Chicago	11	150			
Yoss Geo F	Central City	185	2000	400	700	
Zachgo Hugo	Danforth	20	200		100	
Zoll C	Vermont					

INDIANA

Cosby J J	Evansville					
Cox S M	Angola	50	1000			
Good I R	Marion					
Hesmer Marshall	Evansville					
Pouder Walter S	Indianapolis	5				
Proper Mrs F A	Portland					
Roorda J	DcMotte					
Sage Geo	Linton	45	200			
Shaper E F	Chesterton					
Smith B A	Clinton					

INDIAN TERRITORY

Hairston J T	Salina	285	2500		8000	
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IOWA

Ahrens Herman	Elkader	21	72	72		
Aldrich B A	Smithland					
Allison Albert	Maquoketa					
Armstrong J C	Marshalltown	15				200
Arnold R B	Lovilia	56	1400	400		
Aasmussen Aug	Avoca	74	2000			
Bechly Fred	Searsboro	34				
Beebe G H	Marshalltown	100				100
Benton Dillman	Maquoketa	200	1000			
Benton R E	DeWitt	85	625			
Benton Wm	Maquoketa					
Bergen J C	Livermore					
Bernschein Ernest	Ft Dodge	200	1500	500	1500	1500
Bevins Edwin	Leon	189	3500	500	2500	500
Blackburn G	Lamont					
Brown Edwin G	Sioux City					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Brown D K	Norwalk	190	1500			3000
Carter C K	Eagle Grove					
Chapman H I	Adel					
Clark S H	Elwood	29			100	
Clark C H	Albia					
Congdon H W	Onawa					
Coverdale Frank	Maquoketa	470	4500			
Cowgill B F	Villisca	7				
Doney E A	Dixon					
Dufford Jno	Altantic					
Evans Mrs Clara	West Lansing	200	3500			
Fairbank C A	Anamosa					
Feree J O	DeWitt	16				
Finsan Mrs M J	Central City					
Fleming Peter	Lyons					
Folsted P J	Hesper					
Frey G H	Center Point					
Green L C	Forest City	70	1000	500		
Grubbs Isaac	Astor	125	3000		3000	
Hall F W	Hull	93	3000	1000	4500	1500
Hoffman Geo	Riverside	50	600	150		
Hnnter Isaac	Cascade	41		850		
Kane James	Dubuque					
King D N	Hazelton					
Knipfer G	North English	80	1500	1000		1000
Kretchmer E	Red Oak					
Lamkin Lewis	Sioux City	27	600	600		
Loehr Adolph	W Ft Dodge	17	500			
McGregor D A.	Clarksville					
McPherson A & L	Wesley					
Masiker W	Lansing					
Mitchell Geo M	Council Bluffs	38	1100			400
Morris C E	Coon Rapids					
North Lyman	Essex	30	400	450		300
Ohmert G A	Rockdale	93	1500	500	600	3000
Pearson Wm	Colfax					
Prather C V	Corning	48	500	600		
Provan J W	Traer	120	300	300		
Russell E D	Clare	137	3500	2000		
Schoonover H B	Scranton	30	300	250		
Secor Eugene	Forest City	25	400	100		
Slaba L M	Buffalo Center					
Jmith E N	DeWitt					
Snyder Frank	Anamosa	115	500		5000	
Snyder S W	Center Point	110	2200		1000	
Staininger N	Tipton	270	500		2500	
Stocks J C	Grinnell	85				

NAME	TOWN	No. Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Strong J L	Clarinda	100	200		1200	
Warner A M	Arlington					
Wheeler E C	Marshalltown	100				
Wierks C	Hosper					
Winch Warren H	Hopkinton	46	400	400		1600
Woodhouse Jos M	Durango	112	400		4500	2150
Wyrick Montgomery	Cascade	45		50	2430	

KANSAS

Ackley M R	Topeka					
Benedict H S	Hutchinson					
Bohrer Dr G	Lyons					
Buck Carl F	Augusta	106	500	4000	200	1000
Carson H F	Bland					
Carson Wm	Hutchinson	35	1500	900		
Cheney H A	Great Bend	28		200		800
Christie J M	Waverly					
Davison E	Garden City	200	400		1200	
Dole W E	Geuda Springs	32		150		1500
Duff A H	Larned					
Dunham E W	Topeka					
Ferguson W A	Eskridge					
Hobble P R	Dodge City	46	600	100	500	900
Keene O A	Topeka					
Longshire J S	Topeka					
Loofbourrow N	Dalton					
Lux W L	Tecumseh	60				1000
Measer J J	Hutchinson	160				
Moll Louis	Eudora	43	1000			
Morehead Arthur	Leavenworth	102	1200	800		
Parker Dr Frank	Abilene	40				
Roby Mrs. S M	Pittsburg	50				
Shackelford J W	Paxico	20		200		
Sibley H A	Lawrence	53	400	600	300	500
Smith Mrs J D	Troy					
Smith J D	Troy	86	1000	500		
Stratton A I	Reading	28			2500	
Webster E S	Hutchinson	20	270	300		200
Wilson Spencer E	Olathe	100	2271		567	
Yaggy E E	Hutchinson					

KENTUCKY

Clements E J	Morganfield	32	400	200	
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LOUISIANA

Howell G P	New Orleans				
Moore Jas F	Logansport				

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
MAINE						
Austin A R	North Hancock	22	88		300	440
Brown E S	Caribou	175	600	500	1500	
Buswell Turner	Solon	5				250
Pulcifer Nathan	Presque Isle	70	1800		100	
MARYLAND						
Dalbey A S	Rockville					
Hammond L A	Keedysville	27	600		400	
MASSACHUSETTS						
Coburn Jno P	N Woburn	34	500		400	
Fichtenmayer M P	New Bedford	10			500	
Hopwood J W	Attleboro					
LuHeureux S H	Boston					
Squier D E	Monson	6	200			
MICHIGAN						
Aspinwall L A	Jackson					
Binger H C	Burton	55	1600		100	
Bleach G A	Jerome	67			1400	800
Bringham Curtis L	Plainwell					
Burrell H D	Packard					
Cady Clyde	Grass Lake					
Carver Robert	Manton	26	476			
Chapman S D	Mancelona	180			13000	
Chase H H	Bear Lake					
Collis T H	Manton					
Cox Lurinda	New Troy					
Derby John E	Crosswell					
Denman Geo H	Pittsford	80	3700		350	
Doane C D	Otisville					
Doty H A	Central Lake					
Edwards W H	Decker					
Every W H	Clinton					
Forbes W E	Plainwell					
Goodwin Geo E	Portland					
Graden Rudolph	Hand Station					
Criggs Leonard	Flint					
Hall E L	St Joseph					
Hammersmark Jones	Vassar					
Harris J N	Bellaire					
Harmer Walter	Máistee					
Hilton Geo E	Premont					
Hinman Z M	Sparta					
Huff C A	Clayton					
Hund Fred A	Marine					

NAME	TOWN	No Colonies	COMB White	EXTRACTED White
			Amber	Amber
Hunt E M	Bell Branch			
Hutchinson W Z	Flint			
Kirkpatrick G H	Rapid City			
Keeler H H	Grand Rapids			
Larrabee J H	Lansing			
Lear W E	Grand Ledge			
Ludington A A	Verona Mills			
Macy R L	Grand Rapids			
Meyers Thos	Carsonville			
Morgan James E	Dansville			
Meyers John	Estey			
Nichols C M	Addison			
Olinn T T	Okemos			
Pulsifer C F	Nesson City			
Randall J E	Muskegon			
Rattray Arthur	Almont			
Randall J E	Muskegon	30	800	
Rosmusen Frank	Greenville	50	700	1000
Roop A E	Rhodes			
Schneider Chas	McIvor	25	500	200
Shearer J J	Plymouth	18	175	
Simpson E P	Holland	3	64	
Smith A W	Birmingham			
Smith C F	Cheboygan	75	150	2500
Smith Oscar	Alto	75	2000	200 150
Soper W D	Jackson			
Stray Geo J	Girard			
Strang H F	Plainwell	9		
Taylor R L	Lapeer	110	4700	
Timbe Jacob T	Grand Ledge			
Thomson Decker	McGregor	54		2500 3000
Townsend E	Detroit			
Townsend E D	Remus	400	2000	16000
Townsend O H	Otsego	150		4500
Tyrrell E B	Davison	60		650
White James	Kalamazoo	30		1000
Whitney C C	Bay City			
Wilson Edward	Whittemore	125	4000	
Wood A D D	Lansing	25		2000
Woodman A G	Grand Rapids			
Woodward A G	Lake View			
Woodman L C	Grand Rapids		110	
Wright Leo H	Detroit			

MINNESOTA

Acklin H G	St Paul				
Ansell W R	St Paul	150	8000	1500	1000 600

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Anderson T H	New Sweden	80	2000	200	1200	
Ayers D D	Preston					
Barrett John	Prosper					
Barozyuski Stanley	Gilman	60	1400	500		
Blunt M M	Preston					
Burtzloff Paul	Stillwater					
Cairncross Wm	St Paul					
Cowell Ed	Granger	63	1235	386	700	300
Davis P H	Minneapolis	58		500		1200
Day L E	Clinton Falls	55	400		2050	
Dexter J B	Hartshorne					
Doll P J	Minneapolis					
Downer Mrs J M	Freeman					
Facy M V	Preston				15000	5000
Franklin A B	Minneapolis	19	50		100	
Fraze Henry	Forestville		230	300		400
Fritze W F	Duluth					
Fritze W A	Proctor Knott					
Gaylord N B	Belvidere					
Gent F	Rockford	11			800	
Gluen B W	Greenleafton	85	400		1600	
Goetz Gustav	St Paul	15			600	850
Gray Findlay A	Redwood Falls					
Gray J L	St Cloud	77	1500	280	500	250
Grebin R	Preston					
Haggard H	Excelsior	75	800		1700	
Halverson H J	Preston	60			1200	600
Hance Mrs E D	Thief River Falls					
Harlam C H	Mora	106	3500			
Hart M	Harmony					
Hilstad O C	Nicollet	85	2000	400	800	
Hitchcock C D	Canton	100	1000		1200	
Hoag B L	Harmony	40	600	700		
Holmberg J A	St Paul	58			2000	
Hunt R A	Fountain	111	2500			
Hutchinson Mrs W B	Granger	27	300	200	400	300
Hutton David	Preston					
Jaques E K	Robbinsdale	20	1200	300		
Jardine J B	Parker	35	250		360	
Kempers John	Preston					
Knutson Carl	Canton					
Lamont Scott	Jarrett	75	1500		500	
Lanskov J C	Fountain	20	650			
Lantz W H	Minneapolis	17			700	
Leege Gustave	Forestville	25			600	400
Leonard L D	Minneapolis	28			1500	
Levy Andrew	Fountain					

NAME	TOWN	No. Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Lindersmith S	Fairbault	170	1500		5000	
Longfellow L	Minneapolis					
McCullough F	Maple Plain					
McEwen Wm	Minneapolis	27	200		300	300
Mapes Sam	Chatfield	14	200		1000	
Matteson C G	Lindstrom					
Messer D B	Plain View					
Miller Albert M	Harmony	38		500		650
Miner Leon E	Foley	8	300	50		
Mondeng Chas	Minneapolis					
Mosier F	Minneapolis					
Murray J W	Excelsior	30		1500		
Nupson Erick	Harmony	5	112			
Ogg D B	Preston					
Oltman Herman	Sauk Rapids	135				
Pierce C E	Whalam					
Poore Hamlin	Bird Island	18	700		300	50
Ramer P B	Canton					
Russell Wm	Minnehaha Falls					
Seiler John M	Excelsior	85	250			100
Shebat V	Wabasha	53	1500	300	300	
Shephard A D	Bird Island					
Szulascki Albert	Foley	68	1510	500		
Storé Geo	Champlain					
Taylor Jewell	Preston					
Thompson Mrs J B	Mayzetta					
Tingley W J	Stillwater					
VanderBee G	Preston					
Vierling M A	St Paul					
Washburn F L	St Anthony Park	7	200			
Watt I J	Ronneby	75	1000			500
Wheeler F E	Litchfield					
Wille F W	St Paul					
Witte H L	Minneapolis	40	112		4000	
Wyngate Mrs W S	Minneapolis					

MISSISSIPPI

Bonner T L Landersville
 Hendrix O P Satartia
 Sailor D A Woodburn

MISSOURI

Abbott E T	St Joseph					
Bachman John	Bass	40	850		300	250
Badd G W	Chillicothe	83	3200	1000	100	
Baum F W	Kansas City					
Betke Herman	Webster Groves	24	150			1500

NAME	TOWN	No. Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Calhoun A O	Victor					
Cary W F	Wakenda	50	700			700
Coffelt Jane	Latham					
Conser John	Sedalia	100	2000			700
Cooper R H	Fayette					
Darby M E	Springfield					
Darrow Chas M	Milo	47				2500
Felt J H	Chillicothe	45	500	100		875
Fox J J	Wayland	20	150			
Foreman Paul	Oakwood	73	2000			2000
Gale Aaron W	Chillicothe	21	200			200
Goss Frank L	Fair Haven	110				
Hollkamp Robert A	St Louis	82				5000
Hurt W D	Pleasant Hill	109	800			2000
King W W	Springfield					
Knoebel O H	Mehlville					
Larch E C L	Savannah	70				6000
Leahy R B	Higginsville					
Lockhart A E	Diamond	59	1410			2725
Long Irving	Marceline	50	1000			2000
Nebel Emil S	High Hill	123	200	500	1600	5000
Phillips John	Oric					
Powell A M	Springfield	32	600	158		
Rollinger John P N	Linn Creek	5	90			
Rouse J W	Mexico	44				1500
Sampson A D	Osborn					
Scott Geo E	St Louis					
Scroggins Joseph J	Leesville	1				
Shackelford Jas J	Napton	11	394		847	400
Thiele F H	New Boston	100	5000			3000
Thompson F K	Chillicothe					
Tribble M E	Marshall	22	254	200	1010	148
Urban E	Louisiana					
White N R	Nelson	13				1000
Williams J T	Noel					
Willmer L H	Napoleon	27	1030	1000		
Yeakey H C	Huntsville					
Yeakey J C	Huntsville					

MONTANA

Benton Ralph	Bozeman	32	50	2300
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NEBRASKA

Biesmier Fred	Sterling	20	200	100
Chinn Richard	Wakefield	25	300	800
Davis Jas J	Cook			
Hortman S	North Platte			

NAME	TOWN	No Coloni	CONB		EXTRACTED	
			White	Amber	White	Amber
Hornung Emil	Schuylerville					
Hudnall Wm C	Omaha	5				
McMiller Geo	Dakota City					
Parker W B	Hardington					
Root W H	Carroll	42	600	300	300	
Schock Geo T	Blue Springs					
Whitcomb E	Friend	20				
Whitford G M	Arlington	27			1000	1400
Withanse J U	St James	125				
Young J M	Plattsmouth	60				

NEVADA

Carter J W	Smith	100	5000	1000		
Flory I D	Yerington	600	10000		22000	
Hambangh J M	Leetville	155				13200
Leyell John W	Reno					
Rowe Thomas	Golden Hill					
Tidd C C	Smith					
Warren Harry K	Wabuska	300	10000	2000		

NEW HAMPSHIRE

Cook B D	Wilton					
Reynolds H E	Westmoreland					
Wilford N H	Wilton					

NEW JERSEY

Bogardus Rev W E	Brookdale					
Coles John D	Woodstown	3	120		60	40
Fennell James T	Beverly	10	18			
Herman F G	Englewood	40	500	500		500
Hutchinson J V	Hamilton Sqr		(Diseased)			
Kiser Nathaniel	Brookside					
Luttgens C H	Hammonton					
Myers M J	Woodcliff	18				
Reeves S V	Haddonlula	80				
Reimer Chas F	Oradell					

NEW MEXICO

Allen W P	Albuquerque					
Eversdale Geo H	LaPlata					
Gastright W C	Las Cruces					
Scoggin Edward	Carlsbad	150	500	500	1200	12500

NEW YORK

Allen Chas B	Central Square	50	250		750	
Alexander E W	Delanson					
Atherton Alfred	Caneadea					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			Hite	Amber	Hite	Amber
Austin Edwin	Moravia					
Baily A	Cardiff					
Baker C F	Belmont	50	1400		1500	
Baldridge C J	Kendaia	126	500		6000	
Ballard D D	Valois	24	500		250	
Barber T H	Eddy	95	7000			
Barnes Arthur	Canajoharie		1000	800	1500	800
Bean M C	McGrau					
Beatty G W	Auburn					
Becker E J	Rushville	65	2100			
Beckwith W E	Freeville					
Belden G W	Berkshire	150	1200		2000	2000
Bettsinger N N	Marcellus					
Bixby J D	Guilderland Center	240	2000	1000	3500	2000
Blanchard Allison	Naples	150	2500	2500		
Blighton D F	Northville	82	100			
Bliss H E	West Winfield	70	100		3000	
Boyes Mrs Emma	Penyan					
Burden O E	Birdsall					
Burgett J E	King Ferry					
Burton Wm	King Ferry	65	1100			
Carr Wallace	Union Springs					
Carter G W	Jamestown					
Case H L	Canandaigua	70	2200		500	
Coe O R	Windham LIFE MEMBER	40			300	200
Cogshall D H	West Groton	500			5000	4000
Coggshall W L	West Groton	1200	4000	1000	20000	10000
Comstock A B	Sherwood	24			1000	
Conklin Jos R	Moravia	53			1800	600
Coulson S L	Moravia	3	150	50		
Cooper L A	Middlesex					
Craig Stewart	West Galway					
Crockett E R	Janesville	28	500	200	400	100
Cunningham John H	Syracuse					
Cyrenius F H	Oswego	100	2000		500	
Davis W L	Ludlowville					
Delamater James	Fort Plain	16	375			150
Denison Dana	Truxton					
Derr H E	Manchester					
Dewick Joseph	Rnshville					
Dickerson L H	Ludlowville					
Dines Oscar	Fulton	94	3000		1500	
Dolittle G M	Borodino	30	2000		600 queens	
Doxtater Chas	Fulton	3	175			
Dugdale T I	West Galway	94	1000		300	
Dunlop Joseph	Ovid					
Eames Edward A	Buffalo	4			300	

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Elwood P H	Starkville					
Emens Fred S	Fayette	1				
Enders Otto C	Oswegatchie	80	1000		1000	
Fairbanks M H	Homer	24	125	50	300	300
Fargo F H	Batavia	90	5000	200		
Faville Chas	South Wales					
Ferguson Alfred	Guilderland	36	325	400		50
Ferris Geo L	Atwater					
Ferry H J	Mt Vernon	75	475	500	600	200
Fisher R S	Barkess					
Forman O J	Weedsport					
Fordyce J B	Scipio	29			1280	480
Foster F E	Middlesex					
Freer C S	Blodget Mills					
French A A	Black River	250	4000		400	400
Glynn Michael	Oswego	2				
Gray Wm H	Ballston					
Green Joseph	Rochester	29			300	
Greiner F	Naples	120	4000		1500	
Greiner G C	LaSalle					
Gressman Elmer	Water Valley					
Haight E J	Rock Valley	75	200	300		100
Haines G W	Mayfield	70	200		1200	1800
Hall David	Warsaw					
Hallegas C A	DeKalb Junction	108	4500			
Hardy D R	Watertown	120	3000			
Harrington M C	Watertown	77	1000	600		800
Heunessay John F	Ballston Station	17	250			
Hershisher O L	Buffalo					
Hershisher Mrs O L	Buffalo					
Hester H E	Syracuse	46	1200	500		
Hetherington Herbert	Cerry Valley					
Hilton Alden	Schenectady	20	700	100		
Hochstadter E	Poughkeepsie	7		74		410
Hodges Geo	Belmont	33				
Hodge Wm	Onondaga	10	250	100		
Homer John	North Java	86	4000			
Hood John	Cayuga					
House F W	Baldwinsville					
House S D	Camillus	96	3500		7000	1000
Howard C B	Romulus	400	3000	4000	25000	15000
Howard B F	Hayts Corner	110	4000	2000		
Howe F W	Baldwinville	12	400	50		
Howe G B	Black River	60	3000		300	
Back Mrs G B	Black River					
Howell E D	New Hampton	38			790	
Hull Wm	Spragueville	152	8500	1000		

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Ingraham F B	Naples	11	120	130		
Insse F E	Canandaigua	14	000			
Ireland H F	Syracuse					
Jackson C H	West Galway					
Janack John	Benson Mines					
Jansen F P	Gloversville					
Jones S C	Alplaus	25	500	800	500	200
Kinyon Irving	Camillus					
Kilmer Geo E	Meridian	8	65	100		
Kinzie C U	Niagara Falls					
Knapp Chas W	Shortsville	27	500			
Lambkin Ward	Ledyard					
Lawrence E M	Mayfield	30	400			
Lee Amos O	Aurelius Station					
Lesser F W	Syracuse	130	300		11000	
Lindsey C V	Attica	55	2300			
Loomis F B	Rushville	60	2500			
Loneks Fred H	Lowville	175	3000	2000	3000	
Ludden J S	Cranesville					
McKeon John	Dryden					
McKinley William	Buffalo	32			1000	
McLellan H L	Trumansburg	100			2000	5000
McNeil James	Hudson	313	340		14500	
Marks W F	Clifton Springs	70	1100			
Marks Jessie E	Clifton Springs					
Marlow Alfred	Cape Vincent	45	1200			490
Maryin S H	Messengerville					
Meyers Hubbard	Buffalo	4	300			
Miller W F	Mottville					
Mills H C	Camillus					
Morcroft J H	Syracuse	20				
Morgan J M	Camillus					
Moyer Jacob H	Fort Plain	10			500	
Munson J O	Groton					
Nash Samuel	Syracuse					
Newton W C	Fulton					
Olmstead Chester E	Bloomfield	160	4500		100	
Oertel L A	Gloversville	16	28			
Pattington Charles	Scipioville	14	270	700		
Parker Dr C L	Onondaga					
Perkins C A	Venice Center					
Pelling George S	Stanley					
Perry E H	Manchester					
Pierson J W	Union Springs	58	1200	1000	1300	1400
Plaisted Roscoe	Rexville	22	300	200		
Plummer F H	Mannsville	100	2000		2000	
Preston A L	Homer	15	400	200	200	150

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	Amber	White
Putnam Charles	Johnstown	20	500	1200	100	200
Sheppard W W	Wayland	2				
Short W H	Syracuse					
Smith Lee B	Vincent					
Smith A W	Parksville	60			1250	
Southerland D C	Halls Corners					
Southerland Mrs D C	Halls Corners	12	400	70		
Southerland C C	Canandaigua	85	2700			
Soward Geo M	Ira					
Stafford L A	Blodgett Mills					
Staley Elias	Tribes Hill					
Stanley Seward	Amsterdam					
Stewart Charles	Sammonsville	181	7000		4000	
Quick Charles E	North Branch					
Swartz R H	Naples	5	258	140		
Rains R B	York	50	3000			
Ransom G F	Syracuse					
Rram E W	Fort Plain	124	3000	1500	1500	
Rhodes J P	Hannibal					
Riester Peter	Auburn	76	900			
Roat H C	Rushville					
Rose Charles	Victor	17	400	150		
Rugg Melvin	Victor	40	500	500		
Rulison Earle	Esperance	90			4700	5000
Rupert John	Stanley	24	350	200		
Russell Dr S A	Fulton					
Salisbury F A	Syracuse	8			350	
Secomb J S	Moravia					
Short W H	Syracuse					
Shear Peter E	Saugerties					
Snyder S J	Aurora					
Snyder Bee Company	Kingston					
Steel H W	Canandaigua					
Stevens Mortimer	Pennellville					
Stevens N L	Moravia	725	6000		12000	
Stewart Dougall	Johnstown					
Stewart Charles	Sammonsville					
Stout R S	Auburn					
Stringham I J	Park Place					
Stuhlman John	Fonda					
Stults H L	Romulas					
Suter John	Seneca Falls					
Swartz R H	Naples					
Taylor John G	West Galway	97	900	400		
Thompson A M	Whitneys Crossing					
Townsend W C	Buffalo					
Turner George B	Auburn	5	250			

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Tuttle Charles	Sodus	16	300	200		
Twing Prof C B	Syracuse					
Utter J W	Amity					
Vandercoer G H	Amsterdam					
VanDeusen J A	Sprout Brook					
Wagner Henry	Elmira					
Wahl L F	Chili Center	37			1500	
Ward W S	Fullers					
Wardwell Chas L	Union Springs	100	2000			
Weaver N B	Canandaigua	8	72	48		
Weeks M P	Groton					
Weeks Geo L	Skaneateles					
Welsh Charles M	East Galway					
West N D	Middleburgh	330	2000	8000		1000
Whiting J I	Bolivar					
Whitman F E	Moravia	55	325	550		
Whitney Geo W	Geneva					
Wilcox W H	Stanley					
Williamson M T	Trumansburg					
Wood M R	Cortland					
Wood M W	Auburn					
Woodward Theo J	Gardiner					
Wooster V R	Lysander	4				
Wright W C	Clarindon					
Wright W D	Altamont					
Yates Theodore	Randall	50	2000	1000		2000
Yeager R E	Cameron Mills	60	1200	300		

NORTH CAROLINA

Hyatt Miss Delia	Kingston	85	3000
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OHIO

Bails Thos	Oberlin			
Bailey F G	Newton Falls			
Best M	Toledo Sta B			
Boyden A L	Medina			
Buler D L	Wauseon			
Calvert J T	Medina			
Cobb Jay	Lorain			
Cole Austin	Conneaut			
Cook Geo W	Latty	7	200	
Cross A B	Racine	22	400	
Davidson Will	Lewisburg	76	950	
Fowles Chalon	Oberlin			
Halter A J	Akron	50	1000	800
Hankins N E	Mendon			
Hasty E E	Toledo			

NAME	TOWN	No Colonies	COMB White	EXTRACTED White
			Amber	Amber
Hawley Chas	Coolville			
Heidenescher Henry	Landeck	1		
Huntington R E	Painesville			
McBride F	McGuffey	20		
Moore J F	Tiffin			
Morehouse John F	Springfield	12	200	
Muth Fred W	Cincinnati	69		4500
Osborn Edson	Success	20	200	500
Quirin H G	Parkertown	400	Queen rearing	
Rauch P H	Toledo			
Ray Mrs M A	Selig	37	268	
Root A I	Medina			
Root E R	Medina			
Root Huber	Medina			
Shaffer H	Cincinnati			
Shearer Geo W	Canton			
Simon M N	Bloomdale	27	500	921
Staley Henry K	Cincinnati	15	200	300
Steffy Seward	Bishopsville	21	120	
Stevenson D P	Kenton			
Weber C H W	Cincinnati			

OKLAHOMA

Barker D E	Oklahoma City	15	225
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OREGON

Ahlers Herman	Push	92	1800
Fuge Clark S	Oregon City	43	850
Harris J M	Owyhee		
Mallett C W	Ontario		
Olk Mat	Dell		
Pennington A T	Arcadia		
Pennington W H	Arcadia	500	4000
Rice B F	Arcadia		
Scott Mrs Nancy	Dell	70	3000
Shuck & Reoma	Merrill		
Townsend M M	Arcadia		

PENNSYLVANIA

Baclay Richard	State College				
Beaver Harry W	Watsonstown	140	1500	1500	2000
Boucher Gurd	Galeton				
Carline S E	Westpike				
Costello John D	Harrison Valley				
Day Chas D	North Hampton				
Dempwoolf E A	York	3	78		
Dykins C A	Westpike				

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Edwards E E	Harrison Valley	49	300	400	100	200
Elliot L A	Harrison Valley					
Fisher Jas H	Nazereth					
Fletcher Nathan	Harrison Valley					
Frick H N	Germantown					
Grant A A	Galeton					
Grant Elmer E	Galeton	45	800			
Greene Chas N	Troy	5	200			
Hanber Geo W	Harrison Valley					
Hayes F A	Farragut					
Ives James	West Chester					
Ives Victor	Ulysses					
Johnson Gus	Galeton					
Johnson John H	Bangor	3	72	36		
Jones J T	Mayersdale					
Kanagy A H	Milroy					
Mandthy John R	Lookout					
Moltz Theo M	West Fairview	19	1000	300		
Moyer H M	Bechtelsville	28	200	100		100
Nelson John U	Shawville					
Neizel Oliver	Reading	7	300		200	
Plaisted Geo	Ulysses	63	800		300	
Prothero John N	DuBois					
Randkey J R	Lookout					
Rick John	Reading	25	140		105	
Seaman Rev A R	Connellsville	30				350
Selser Wm A	Philadelphia					
Smeltzer J A	Hopewell	23	500	200		
Stiles Rev H H	Altoona	3	85	60		
Strittmatter F J	Bradley Junction	43	800	900	500	1150
Sutton Delos	Sunderlinville					
Turner Elmer E	Ganger					
Whitcomb Geo	Corydon	75	1500	1000		
White Charles	Lopez					

RHODE ISLAND

Miller A C	Providence	37	60	180
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SOUTH CAROLINA

Bailey M W	Spartanburg
Switzer D W	Roebuck

SOUTH DAKOTA

Adam J M	Yankton
Chantry Thomas	Meckling
Chamberlain G L	Vermillion
Collins Frank	Gayville

NAME	TOWN	No. Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Cross P N	Gayville	12	300	300	400	300
Danielson Daniel	Clarkson					
Dibble G L	Parker					
Dibble G L Sr	Parker					
Donner Mrs J M	Freeman	5	45			
Duffack J J	Yankton	35	2000	300	600	
Flick G W	Vermillion					
Hobbs J M	Yankton					
Huebner J A	Hot Springs					
Johnson Nels O	Yankton	40	1000	800	500	500
Johnson J H	Wakonda					
Hunkle Harry	Centerville	8			600	
Lingo C T	Yaknton					
Matteson Jesse	Tabor					
Millige O C	Mission Hill					
Morgan R A	Vermillion	25	1600			300
Olson Albert J	Wakonda					
Rossteuscher Arthur	Yankton					
Schaefle Ben	Yankton					
Scheel Hosier	Yankton					
Seiler Michael	Westerville					
Smith H H	Yankton	6				
Syvernd L A	Canton					
Wadsworth T H	Gayville	30	600	400	900	700
Waterman N S	Hooker	11	700			
White C J	Yankton	50	500	200	300	100

TENNESSEE

Taylor A D	Memphis	6	15	245
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TEXAS

Adams T J	Russell					
Adams H J	Schertz	85	500	250	75	
Ankarstolpz Nels	Lund	45				
Archer B L	Mineral	85			3400	
Armstrong E A	Carrizo Springs	40	1320			
Atchley E J	Beeville	800	20000			
Aton r L	Round Rock					
Bell J D	Verdi	72	2740		780	800
Bell T J	Fairview					
Breeding C P	Beeville					
Brite W T { Co	Verdi {	600				
Brite S S }	Verdi }					
Buller Miss Helen	Alvin					
Carr H M	Cranfills Gap	80		200	2000	
Craver G L	Verdi					

NAME	TOWN	No. Colonies	COMB		EXTRATED	
			White	Amber	White	Amber
Chambers J E	Vigo	250			7000	3000
Conrad W C	New Braunfels	64	1600			
Courtney J L	Beeville					
Cox Dr A B	Ladonia	3			100	80
Crandal W E	Floresville	40	520		990	800
Cravens William	Earle	800	40000		1000	15000
Danner J A	Leggett					
Davidson Frank	Fairview					
Davidson Will	Verdi					
Davidson G F	Fairview					
Davidson M F Jr	Fairview					
Davis A I	San Antonio					
Davis Dr R P	Petty	40	1000			
DeBord S W	Runge					
Downs E L	Arcadia					
Dulling Cris						
Evans & McCloud	Leggett					
Faust M M	Floresville					
Fournier A	San Antonio					
Franklin S K	Floresville					
Gray A J	Floresville					
Grosenbacher Henry	San Antonio					
Hagood J M	Enloe					
Harrison E S	Verdi	66	840	960	240	240
Hill J K	Uvalde					
Hill M P	Berclair					
Hillje Miss Meta	Alvin					
Holcombe C C	Marcelena	47			240	600
Hufstadler Geo W	Beeville					
Hyde O P } Co	Floresville }	1000	40000		1000	
Hyde H H }	Floresville }	200	5000			
Jani A	Runge	60	2400		2500	
Johnson Harley	Charco					
Johnson J T	Charco	320				
Jones E R	Beeville	160	3300	1500	400	1400
Kammer S W	San Antonio					
King I A	Derby					
Knolle A H	San Antonio					
Knowles R C	Altman	20				
Kolinsky Jul	Lan Antonio					
Krebs D	San Antonio	20				
King J D	Mathis	97	2500			
Kyle W C	Velasco	120				
Krenger A L	Postoak Point	105			2500	
Lackland S M	Waxabracchie	25	1000	500		
Laws W H	Beeville	1000	17000		1000	
Lieb J J	Longstreet					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Linnartz Peter	San Antonio					
Longenecker E R	Lytle	70		800		200
McClane John	Corpus Cristi	2	100			
McKay Dr D	Falls City	32				
Madey W H	Glendale					
Manlove J H	Couch	280			8800	
Mathis G W	San Marcos					
Mathis W H	Verdi	27	500		200	100
Milan D C	Uvalde	450	10000		5000	2000
Miller Carl	Runge					860
Mills A F	San Antonio					
Mitchell H A	Shepherd	341	12000	2500		
Nance G E	Charco	43	2800		1000	500
Newell Prof	Wilmon College Sta					
Nutt M C	Beeville	150	2512	700	2032	800
Oelckers H	New Braunfels	105	1800			4500
Ormand R J	Floresville	76	3755	480	240	
Pharr John W	Berclair					
Pharr Nathan	Berclair					
Phillips C S	Beeville	75	1000			720
Piper Co H	Calaveras					
Pollard Chas	San Antonio					
Reid M B	Velasco	150				
Ripps Emil	San Antonio	80			300	400
Roberts G W	Menardville	160	3000	2000	1000	
Rodgers A W	Runge	144	4000			
Rosson Lon	Crisp	300	4000		3000	3000
Rousseau L C	Waxahachie	20	1000			
Slyer J B	Jonah					
Settler H	Hunter	51	2060		600	675
SanDau F W	San Antonio					
Sanderson Prof E D	College Sta					
Scholl Louis	College Station	180	6000			
Scott J B	Floresville					
Sheldon Miss Marie	San Antonio					
Shockley A P	Hamilton					
Small J W	Dinero	300	2000		4000	
Smith L B	Rescue					
Smith W W	Round Rock					
Stachelhausen L	Converse	400	11500		6500	
Sueltenfuss Otto	San Antonio	40	2160		2500	
Tackett J H	Fairview	125				
Teel J F	Elmont	125	2000	800	1000	1200
Toepperwein Udo	San Antonio	250				
Treon J B	Floresville					
Victor W O	Wharton					
Vordenbaumen Lee	Cibolo					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Waldrip J J	San Marcos	180	500	200	2000	1500
Walton A Y	San Antonio					
Weaver Z S	Courtney					
Weidmann C F	Boyce	33	150			
West C R	Ennis					
West M C	Floresville					
White W H	Blossom					
Williamson C E	Floresville					
Wolf J W	Mineral	80	1800		3100	
Wright A A	New Braunfels					
Wright A P	Pearsall	150				
Worth Daniel	Karnes					
Zimmerman W	San Antonio	280	500	2500	750	250
UTAH						
Augustson L G	Vernal	55			4000	
Badily Robert	Vernal					
Bartlett Geo H	Vernal					
Bartlett C C	Vernal					
Beau Newell K	Ferron					
Belliston Thomas	Nephi					
Belliston Winford	Nephi	160	1400		10500	
Bingham Thomas	Vernal	45				2000
Broderick L B	Emery					
Bunting Jas L	St George	35			1500	
Christinson Brigham	Vernal					
Christinson C	Inveury					
Coleman Mrs L S	Teasdale					
Collier Jacob	Vernal	35			1500	
Davis John N	Vernal	60			1800	
DeVore H C	Vernal					
Dillman Mrs J E	Vernal					
Elliott I N	Salt Lake City					
Empey Mrs K J	Price	40			1800	1800
Fawson A	Grantsville	30			1440	545
Freestone Geo	Vernal					
Goodrich Geo A	Vernal	40			2500	
Hacking James	Vernal					
Haight J B	Vernal	43			2000	
Halgate Mrs H	Vernal					
Halgate John	Vernal					
Hansen L	Bear River City					
Hodgkinson Wm	Vernal					
Hone Geo	Benjamin					
Jansen John	Vernal	40			2000	3000
Jenson C K	Iron	35			4000	
Jenson Neils	Idle Dale					

NAME	TOWN	No Colonies	COMB		EXTRACT	
			White	Amber	Amber	White
Liddoway W H	Vernal					
Longston Mary	Vernal					
Lovesey E S	Salt Lake City					
Lind Louis	Vernal	80	150		6000	1000
Lowe R F	Austin					
Lowe R A	Austin					
Marshall James	Vernal					
Meeks Fred	Varnal					
Merkley John	Vernal	172			15000	
Miller Nephi	Providence	200	3000		10000	
Mitchell Dr G D	Ogden					
Morris R A	St George	200	300			1000
Mullins H	Vernal					
Nelson Andrew	Ferron	175			6000	
Otteson Chris	Huntington					
Pack Leon	Vernal					
Pike L A	Ft Duchesne					
Peters Frank	Vernal					
Peterson Cris	Price					
Powell Alfred	Vernal					
Powell W S	Vernal	90			2000	300
Preece Nephi	Vernal					
Reader J H	Vernal	180			6000	7000
Rhees R T	View	1500	500		70000	
Rickens W H	Vernal					
Rudey J T	Vernal					
Sattethwait J W	Laketown	35				
Siddoway W H	Vernal					
Smith J A	Heber	70	4500			
Sorenson Ole	Ferron	13				400
Stewart W J	Spanish Fork	800	40000			
Taylor Alma	Vernal					
Terry Joshua	Draper					
Thompson J T	Vernal	180	100		8000	1000
Thorn Geo E	Vernal					
Vandine B A	Vernal					
Vangundy G W	Vernal	140	200			
Vanduine Mrs Mary	Vernal					
Vangundy G W Jr	Vernal					
Voigt Mary	Vernal					
Weeks Fred	Vernal					
Welch T R G	Morgan City					
Willson B R	Vernal					
Wielson Chris	Castle Dale					
Young Franklin	Orangeville					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
VERMONT						
Crane J E	Middlebury	480	12000	400	1800	
Scofield S E	Enosburg Falls	41	500	100		
Wilson Newell H	Derby					
VIRGINIA						
Hayes Charles	Leedstown					
Rawlinson L S	Muse	19	100	200		
WASHINGTON						
Christensen Hans	Conway	80	800		2100	
Davis Eugene D	Marysville					
Isaacson John A	Clear Lake	10		200		1000
Petrie Frank	Sunnyside					
WISCONSIN						
Adair Alex	South Wayne	131		4000		
Ahlers Henry	West Bend	45			475	
Albertson C E	Sun Prairie					
Albright Charles	Downing	22	200			
Allen A C	Portage	104	400	200	6000	2000
Anderson A C	Holmen					
Anderson Andrew	Spring Valley					
Arneson Arnt	Canton	100	500		4000	
Augustine John	Granton					
Baker Mose	Granton	120	575		2500	
Baker Rall H	Whitewater					
Ballou H M	Peebles	200	1000		6000	
Barge G W	Union Center	300	1000		5000	
Barrett Mrs Paul	Prairie du Chien	34	200	800		
Behrens H	Grafton	110			800	
Berline Rustone	Deerfield					
Berenschot Mrs G	Baldwin	27	250			
Bishop O D	Hilbert Junction	75	1200		1400	
Blair L G	Boscobel	200			11200	
Blanchard M	Hilbert Junction	300	500		5000	
Boi Mrs Lena	Glenwood					
Boyd U S	Lancaster	70			1400	2300
Brown H H	Madison	25	50		1000	100
Brown Ira J	Olivet					
Brown L H	Kilbourn	90			1500	(5000)
Brown M E	Stanley	60	1000			
Buck John	Hempel					
Buckley W H	Irvington					
Buetzer Christian	Paoli	40	800		600	
Cady M P	Birnamwood	200	2000		1500	
Candler Miss Matilda	Cassville					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Carlson J P	Prairie Farm	32	1500	1000		
Chapman C W	Spring Valley					
Chloupek Adolph	Mishicot					
Chloupek Victor	Mishicot					
Clasen John H	Manitowoc	149	665		3020	200
Claussen W R	Waupaca	29	300		2400	600
Cochews John	Mishicot	56			2500	
Convey Thomas	Ridgeway					
Cottrell F M	Wittenberg					
Cottrell Ray A	Wittenberg					
Cox William	Viroqua	30	300		1400	
Cressey Geo A	Hilbert Junction	160	600		5000	
Daevis Carl	Madison					
Danniher D D	Madison	4				
Davenport B T	Berlin	104	2000			
Decker Ered	Woodville					
Deutsch Peter	Boyd					
Dexter F Z	Lone Rock	20			700	300
Diehmelt Aug	Milwaukee					
Dittmer Gus	Augusta					
Doe E W	Racine					
Doppel Chas J	Saukville	17	150		1800	
Duescher Wm	KauKanna					
Dye R K	Fon du Lac					
Dyke Pvan	New Amsterdam	90	1800	100		
Eden Formily	Campbellsport					
Ehlert Wm	Hansen	90	300	200	100	100
Elliott Wm	Baraboo	60	700	400		
Emory E E	Stoughton					
Ericson A A	Rockton	20			3000	
Ericson Alfred M	Rockton	20			3000	
Fenton Geo	Glenwood					
Fathers Oliver	Manawa	16			500	
Fick Charles	Tomah	57			1100	
Fisher G W	Spencer	70	500		1200	
Fisk A M	North Ereedom					
Fitts O C	Point Bluff	39	500	1500	500	520
Fleming Mrs Kate	New Richmond	140	2500			
Ford John C	Menomonie					
Ford S C	Lake Geneva					
Fox Elias	Hillsboro	99	100		8500	
Fox Ernest W	Hillsboro	90	200		5000	
France N E	Platteville	420			3800	6000
Frank J C	Brodhead					
Fraser A	Chili	200	2500	500		
Gloege Herman	Monroe	129	8000		500	
Gobel Jake	Glenwood	225	5000		1000	

NAME	TOWN	No Colonies	COME		EXTRACTED	
			White	Amber	White	Amber
Goodrich Ed	Cylon					
Graham Fred	Auburndale					
Greenwood H E	Oshkosh	48			3500	800
Gross Gustave	Lake Mills					
Grup Carl	Curran					
Hall C E	Glenwood					
Hall W H	Glenwood	34	600			
Hanson A W	Racine					
Hanson V A	Emery	59	1500			
Hanselman E H	Augusta	70			4200	2000
Hanegan Leo F	Glenwood	100			3000	
Harker J B	Mt Horeb					
Hartswig Wm	Glenwood	100	2000			
Hatch C A	Richland Center	175	150		16000	
Hayes E M	Veendum	65			3000	
Healey Wm J	Mineral Point					
Hess Art	Spring Valley					
Hess H L	Elmwood	115	4000			
Heurkens Herman	Green Bay	18			1500	
Hill Myron H	Matton	163	700		7000	3000
Hillman Mrs. W J	Richland Center	90	100		2500	500
Hisson John	Menomonie					
Hoffman Jacob	Monroe	75			3000	
Holtman Garrett	Baldwin	490	8000		200	
Howe Marion	Deer Park					
Howard Henry	Thorp	50				3000
Hubble John W	Greenwood	75			6480	
Hughes Alvin	Rewey	42			400	300
Humphrey M J	Stanley	125	1000	1000		
Hurley Theo S	Milton	20	600			
Jaeger C P	Portage	155			10000	4000
Jankoski Thomas	Glenwood					
Johnson E M	Blue Mounds	100	2500		1250	
Jones Geo W	West Bend	75	60		1400	
Kepler Mrs S L	Boaz					
Kohn Mes Aug	Glenwood					
Konecry Joe	Dorchester					
Krause Fred A	Ridgland	90	700		800	
Krossman Gurt	EauGalle					
Krueger Martin	Reedsville	10		50	300	
Kurth Joseph	Mineral Point	84	200	300	2000	1000
Lang C F	LaCrosse					
Lathrop Harry	Monroe	240	1000		10000	400
Lee A W	Downing	47	600	400		
Legee Gustave	Forestville					
Lehmann August	Hustisford					
Lehmann E A	Hustisford					

NAME	TOWN	No. Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
Leonard L D	Fon du Lac					
Lerch E D	Morrisonville	61	600		700	
Lewis G C	Watertown					
Lotz August	Cadott	190	5000			
Luebke Charles	Beloit	49	1505	200	250	
McMurdo J C	Hortonville					
Maeder Hugo	West Bend	36	400		1600	
Mallory Mrs Minnie	Boyceville					
Mallison W H	Jim Falls	134	2000		2000	
Mathews Joseph	Omro					
Messinger Jerom	Elroy					
McLain Geo	Platteville					
Minnich Frank	Baraboo	70			4000	
Miner H P	Ferryville	275	400		6000	5000
Moe H H	Woodford	58	1000		1000	
Motley Fred	Mineral Point					
Murray Fred	Calamine	75	1800		1100	
Neefe Wm	Gothan					
Neihis E F	Platteville	23			900	200
Newman Miss Fannie	Osceola					
Oberley Charles	Menomonie	85	2000	1000		
Ochsner J J	Prairie du Sac	110	1000		9000	
Ochsner Ed	Prairie du Sac		2000		6000	
Olson J C	Scandinavia	70	500		1000	
Palmer A L	Hersey					
Perry Geo H	Fort Atkinson					
Pickard Mrs W J	Richland Center	260			37000	
Boggs Mrs Ada	Chicago					
Piddington John	Platteville	27	700		1000	
Pierce C H	Kilbourn	68				4000
Porter H H	Baraboo	75	200	300	3000	3000
Post Louis	Madison					
Price Fred	Boiseville	76	1800	500		
Prisk Wm E	Mineral	80	1500	1000	1000	
Prumb Wm H	Madison					
Prior Jas	New Richmond	31	500			
Putnam W H	River Falls	38	800		600	
Reblitz Geo	Chilton	75	1000		2000	
Rehorst Theo	Campbellsport	90	345		607	
Reif George	Hixton	90	1000	1000		
Reichert Geo E	Marshfield	150	300		5000	
Rick C J	North Freedom	60	3500	500		
Rick Dr. J B	Mishicot	14				
Roethke Aug	Chilton					
Ross H B	Chetek					
Rudd Joseph	Deer Park					
Russell S	Downing					

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
ostone Berlin	Deerfield					
avage H W	Baraboo	21	800	800	150	50
yles J C	Loyal	80			4000	2000
cheuring Paul	West DePere	275	3000		8000	
chley Robert A	Marshfield					
chubring Fred	Wausau					
cheuman John	Tomah	49			1000	600
chultz G A	New London					
chulz Herman	Marshall	55	800	200	300	
chmidt R H	Sheboygan	110	4500		8200	
chmidt Anthony	Platteville	86			5000	
cott S E	Prairie Farm					
everson Sam	Greenwood	150			6500	
edlacek Jacob	Larrabee					
eitz Wm	Hustisford					
erice Peter	Baldwin					
hafer Geo	Menomonie	230	5000		2000	
kogum Jac P	Coon Valley	95	1900		2000	
mith A	North Freedom					
smith E C	Ashland	9			200	
smith Denton K	Madison					
smith D K	Elmwood					
smith W N	Cadott					
orenson Wm	Bay City					
outhard Wm	Gothan	67			2000	
paelt Paul	Glenwood	38	500			
spangenberg C	Madison					
stevens Andrew	Stockbridge	300	3700		20000	
toneman Geo W	Sturgeon Bay					
tonf Joseph	Mishicot					
tarr C M	Auburn	225	3000			
terns John	Mishicot					
ompson B J	Waverly	92	3455		650	850
ompson C A	Downing	68	2000	1000		
orgerson John	Spring Valley					
owle John	Brooklyn	64	1100		1000	
owle Mrs Jennie	Greenwood					
Trapp Albert	Rosecrans					
Trapp Fred W	Rosecrans	185	50		2500	
Travis I A	Elkhorn	70	900		500	
Travis M M	Marshfield	85	1500	500		
Trimberger John	Granton					
Tufts S	Knapp	86	5000			
Turner Wm	Woodville					
Tutmark John	Downing					
Vandereike L	LakeMills	80	175		500	
VanWinter E T	Readstown	126			4000	

NAME	TOWN	No Colonies	COMB		EXTRACTED	
			White	Amber	White	Amber
VanWoert Martha	Colfax					
Voigt C H	Tisch Mills					
Voigt Chas W	Tisch Mills	2			175	
Voigt Henry E	Hamburg					
Webster D A	Menomonie	56	2300	500		
Weiss Aug	Greenfield					
White Emily	Glenwood	36	600			
White F P	Platteville	45	400		180	820
Whitey Wm M	Lake Geneva	52	700			
Wilcox Franklin	Mauston	40			1200	1500
Wilde Wm	Colby	41	96		3500	500
Williams Mrs J D	Glenwood	28	100	50		
Wilson C F	Soldiers Grove	197			10000	
Wilson G W	Viola	144			14000	
Winters Rev H A	Madison					
Withinski Joe	Glenwood					
Zahn L E	Reeesville	64			1000	

EXTRAS

ARIZONA

Benson P H	Arlington					
Chambers W L	Phoenix	300			3000	6600
Kester H C	Yuma					
Leebrick J P	Mesa	100				800
Morton A J	Tempe					
Odell M O	Tempe					
Ruse E	Tempe					
Young Geo A	Mesa					

ILLINOIS

Anderson A J	South Moline	16	24			
Brooks F E	Galesburg					
Bridge Arthur	Galesburg					
Cole Dr John	Williamstield					
Dickerson N Y	Abbingdon	7	150			
Johnson F E	Galesburg					
Hillman Joseph	Galesburg					
Junod L A	Mullberry Grove					
Moore J H	Brimfield					
Paden James	Galesburg					
Rodcliff W J	Williamsfield	5	201	100		
Reynolds Alva	Alton					
Sheeler S R	Galesburg					
Springer Lewis	Galesburg					
Olson Nels O	Moline					

NAME	TOWN	No. Colonies	COMB White Amber	EXTRACTED White Amber
PENNSYLVANIA				
Applegate A M	Reynoldsville			
Barrows Richard	Haverford	1		
Bender Rev H A	New Chester	13	31	
Buffington Jas	Muncy			
Butz Rev G C	State College			
Cotterman F P	Lewisburg			
Daniel David	Hawthorn			
Dawald Ambrose	Muncy	4	91	100
Eberly H B	Williamsport			
Entermarks Wm	Newberry			
Foelluer Fred Jr	Ottisville			
Fuller O C	Turbotville			
Hahman Wm	Altoona	15	450	300
Henderson J A	State College	5		300
Hines J F	Saxton	25	500	
Hoffman Warren	Muncy			
Hubler Mrs J C	Morrisdale Mines			
Hunsberger Guy	Portland	18	500	800
Johns S E	Concord	74		400
Leighton F W	Williamsport	28	1200	
Lorson N J	Newberry			
Love Nellie	Meshoppen			
Lytle J P	Chambersville	35	300	700
McCarthy W J	Muncy			
McNett E L	Carpenter			
Merrill W P	Muncy	23	400	600
Moyer A S	Balliett	3	75	
Moyer H M	Beechtelsville			
Nelson N J	Keeshequa			
Noll E	Bellefonte	8	250	175
Phillips E F	Philadelphia University			
Pressler E E	Williamsport			
Rea Geo H	Reynoldsville			
Rickolt F C	Muncy			
Snyder S K	Lebanon			
Stanley Grant	Nisbet	2		
Surface H A	Harrisburg			
Suter W T	Riverside			
Swauk Thomas	Muncy			
Wagner Emil	Sharon Hill			
Wallis H R	Muncy			
Woods D L	Muncy			
Yoder W C	Lewisburg			

MISCELLANEOUS

Abbott Arthur Roswell Idaho

NAME	TOWN	No Colonies	COMB White	EXTRACTED White
			Amber	Amber
Adams W A	Park City Utah			
Adams T J	Citronelle Ala			
Atchley Willie	Beeville Texas			
Barth Wm	Riverside Cal	850		
Blocher D J	Pearl City Ill			
Bliss M R	Durand Ill			
Bokhoff H	Davis Ill			
Briggs Geo	Traverse Minn			
Burnell C H	Woodfords Maine			
Crane H A	Hanford Cal			
Davis Evan J	Garvin Minn			
Dickison M S	Firebaugh Cal			
Doan Chas	Hull Iowa			
Dudley Geo E	Middleton Idaho			
Fisk F E	Parama Idaho			
Flory J H	DosPalos Cal	1200		30000
Gent Wm	Rockford Minn			
Groute E S	Abbey Colo	150		
Hopper Bert W	LaJunta Colo			
Ives C S	Ulysses Pa			
Jerabeck J S	Silver Lake Minn	74		5000
Koeppen Aug	Flint Mich	42	600	900
Koeppen Charles	Fredericksburg Va	250	800	600
Landes C O	Lemoore Cal			Queens
Lamont Daniel	Fall Brook Cal			
Littlejohn W H	Battle Creek Mich	50	600	960
Ludlow John	Port Hope Mich	34		2000
Martin Leslie	Washington D C			500
McKinney Geo W	Lapara Texas	75	2000	
Monson John	Fargo N Dakota			
Morlin Chas	Marquette Kansas	75		
Moser Joe S	Calmer Iowa			
Pace Louis	Bruceville Texas			
Patschernick Fritz	Friotown Texas			
Petefish Howard	Orange Mo			
Rand E C M	New York City N Y	5		
Reeves S V	Haddonfield N J			
Rocky Mt Bee Co	Berthond Colo			
Suter John	Seneca Falls N Y	27	750	
Shear Peter E	Sangerties N Y	20		200
Stanley Henry K	Cincinnati Ohio			
Townsend Verron	Vera Cruz Cal	200		
Tounsend W C	Buffalo N Y			
Vickery W W	Evansville Ind	62		3000
Waggener J R	Grantville Kansas			
Eldridge C H	Cresco Iowa			
Davis J C	Bethlehem Iowa			

NAME

TOWN

Kingsley F Hebron Neb
 Bookwalter W H Bookwalter Neb
 Coveyou Elias E Petosky Mich
 Kemecke Joe A Seneca Kans
 Larson Henry Rock Creek Idaho
 Danzenbaker F Miama Florida
 Grimm W W Pekin Ind
 Scott C M Indianapolis Ind
 Baldwin B T Marion Ind
 Smith Jay Vincennes Ind
 Austin Kate V Centerville Ind
 Simpson F B Cuba N Y
 Coulter O V Rifle Colo
 Rhee Mrs R T View Utah
 Davis John M Spring Hill Tenn
 Weaver Almond Nicklow W Va
 Sampson S E Ronceverte W Va
 Turner C G Mechanic Falls Maine
 Appleton & Boznall Simi Cal
 Hall J C Craftonville Cal
 Haner C W Bakersfield Cal
 Howard Valentine Kirkwood Ill
 Johnsen F N Knoxville Ill
 Irwin I N Galesburg Ill
 Neil H V Galesburg Ill
 Collins Jacob St Jacobs Ill
 Wheeler Geo E Putnam Ill
 Stewart Henry Prophetstown Ill
 Yoos Geo F Central City Ill
 Troxell G F Columbia Mo
 Stewart J C Hopkins Mo
 Carico W S Florissant Mo
 Edman E C St Louis Mo
 Pgueger Ray St Louis Mo
 Ostwald Henry S St Louis Mo
 Altwein L E St Joseph Mo
 Keller R Chula Mo
 Holtman John Baldwin Wis

NAME

TOWN

McColm J F Plymouth Wis
 Arnold Mrs F X Deer Plain
 Forquer Albert F E Belleville
 Macy Perry Gallaton Mo
 Keller R Chula Mo
 Henderson J E Elm Grove W Va
 Messe H F Rock Island Ill
 Johnson James H Vandalia Ill
 Smith A E Mt Vernon Ind
 Eversole Jacob Mountainburg W Va
 Vandyne H N Wootton N J
 Drunert Dr F H Warronton Mo
 Moe G E Candelaria Cuba
 Barrett Mrs Kate Washington D C
 Thatcher W A Martinsburg W Va
 Scott J E St Louis Mo
 Rice Arthur Canandaigua Mich
 Morrison H B Fayette Iowa
 Anderson A G Ferron Utah
 Lewis Morgan Lawrence Utah
 Neilson Christen Castle Dale Utah
 Miller Niels P Castle Dale Utah
 Guymon Jr N T Orangeville Utah
 Turnbow J L Molen Utah
 Cooke Miss Ellen N Norristown Pa
 Hahman F Harrowgate, Phil., Pa
 Harris Wm Montoursville Pa
 Hoffa Wm J F Womelsdorf Pa
 Kernan Wm Ringdale Pa
 McPherson J E Reynoldsville Pa
 Plankeehorn Jacob Muncy Pa
 Starry E P Mechanicsburg Pa
 Stewart Wm Elkin Pa
 Zigler S W York Pa
 Brown H E Ellsworth Mich
 Pennell R L Boise City Idaho
 Folick Faed Reno Nev
 Reinecke J A Seneca Kan



**REPORT OF THE 35TH
ANNUAL CONVENTION
OF THE
NATIONAL BEE-KEEPERS'
ASSOCIATION
HELD
Sept. 27, 28, 29 and 30, at
ST. LOUIS, MO.**

The National Bee-Keepers' Association held its 25th Annual Convention in the Auditorium of the Christian Endeavor Hotel at the city of St. Louis on Tuesday, Wednesday, Thursday and Friday, September 27th, 28th, 29th and 30th, 1904.

The opening session took place on Tuesday, September 27th, at 10 o'clock a. m. Mr. J. U. Harris, of Grand Junction, Colorado, occupied the chair.

Dr. Miller, Marengo, Ill., invoked the Divine blessing.

On motion of Mr. O. L. Hershiser, duly seconded, a Committee on Rules and Order was appointed consisting of Mr. Hershiser, (New York,) Mr. Boyden, (Ohio) and Mr. Hart, (California.)

Owing to the absence of the Secretary, Mr. Brodbeck, through illness, out of courtesy to California, Dr. Miller moved, seconded by Mr. Diebold,

that Mr. Brown, of California be appointed Secretary pro tem, which was carried.

On motion (of Mr. Pressler, Penn.,) duly seconded a Press Committee of five members of the Association was appointed consisting of Messrs. Pressler, York, Abbott, Hutchinson and E. R. Root.

After a short intermission the Committee on Rules and Order presented the following report:

RULES AND ORDER OF BUSINESS.

- (1.) Reports of Standing Committees.
- (2.) Reports of special Committees.
- (2.) Unfinished business.
- (4.) New business.
- (5.) Appointment of Committee on National Legislation.
- (6.) Appointment of Committee to the President of the United States setting forth the needs of this industry.
- (7.) Reading of papers,

(8.) Question box.

(9.) Sessions of the Convention shall be from 10 o'clock a. m. to 12 o'clock noon, and from 2 o'clock p. m. to 5 o'clock p. m. with no night sessions unless desired by a two-thirds majority.

No one shall be allowed to speak on any subject more than five minutes unless with the unanimous consent of the Convention.

(10.) The invitations for the next Convention shall be presented at the afternoon session of September 28th. The remarks of members presenting invitations shall be limited to ten minutes.

Respectfully submitted,

OREL L. HERSHISER,
A. L. BOYDEN,
FRED. M. HART.

On motion of E. E. Pressler, duly seconded, the report was received.

FOREIGN REPRESENTATION.

MR. C. P. DADANT: Mr. President, ladies and gentlemen, it has been one of the objects of the executive committee of this Association, inasmuch as we were meeting at the World's Fair, an International World's Fair, to make this an International meeting, and the members of the executive committee instructed me to send invitations to the different Associations in the world. This has not been very successful. We have, I think, one or two foreign representatives coming, and with your permission I will mention the answers I have received in response to our invitation. Mr. Kramer, the President of the Swiss-German Association writes me a long letter in which he thanks us and wishes he could come but says that he cannot afford to, but hopes to be able to return the favor and invite us to one of their International meetings; the French representative at St. Louis was to have been here, but did not know the date of our Convention until too late, and found it impossible to be here as he

has to be in Washington and Boston at this time. Mr. Tipper, editor of the Bee Bulletin, of New South Wales writes a letter in which he expresses sorrow at not being able to be present. He states that the Bee Bulletin has been established over thirteen years and is the official organ of the New South Wales Bee Farmers' Association, also of the Victorian Apiarists' Association. He states that unlike the United States with a population of some 80,000,000 Australia has only a population of about three million and their danger lies in the excessive zeal of supply dealers, who, in their pertinacity to make small bee-keepers, will drive the large men out of the industry to their own ultimate loss. He concludes by wishing our meeting to be productive of good to the industry.

I have also a reply from the bee-keepers of Tunis. Their president expresses pleasure at the invitation but states that they will be unable to send a representative.

The Irish bee-keepers promise a representative from St. Louis who will attend, Mr. Charles D. S. Digges. The Spanish bee-keepers, with headquarters at Barcelona, inform us that Mr. S. Castello has been appointed a representative to our Convention.

THE PRESIDENT. You have heard the reading of the letters. I wish to say on this occasion that our Vice President has done all in his power to get foreign representation and we should thank him for his efforts in that direction.

Mr. York moved, seconded by Mr. E. Kretchmer that the letters of reply be placed on file and a vote of thanks tendered the Vice President for his efforts in connection with securing foreign representation.

DR. MILLER: I wish to say one word, Mr. President. From the reading of a number of foreign journals I know that if it has done no other good Mr. Dadant has succeeded in calling

the attention of bee-keepers all over the world to this meeting, and quite extensive notices have been made in the foreign journals as the result of his work.

The President put the motion, which on a vote having been taken was carried unanimously, the members rising.

MR. DADANT: I thank you gentlemen for your vote of thanks. I am well repaid for the little trouble I have taken.

In the absence of a program, on account of the sickness of the Secretary, Mr. Dadant moved, seconded by Dr. Miller, that the rules of order be suspended and a question box be opened.

The President put the motion, which on a vote having been taken, was declared carried.

BEEs THAT WON'T ACCEPT A QUEEN OR REAR A BROOD.

MR. KREBS (Texas): My bees last year and the bees of a friend of mine this year seemed to cease all energy of every kind and would not keep a queen, raise one, or accept one and would not even take care of the brood. If there is any remedy I would like to hear it.

MR. GILL (Col.): Is it under artificial or natural swarming or what?

MR. KREBS: I manage them by division. The bees seem to have a dilatory disposition, starting with a full colony and simply dwindling down to nothing, and refuse every effort in every particular, whether divided or not divided, to accept a queen or raise one or keep the one they already have, and kill off their old queen. Some have told me they thought it was caused by laying workers, but there were no eggs there and consequently it could not be that. Others in the same neighborhood have had the same experience. As to handling, it does not matter. The other gentlemen I spoke of did not handle them at all. With reference to the forage, almost

anything that is raised in the United States we have. My location is San Antonio, Texas.

MR. DELONG (Neb.): Does the gentleman suggest an individual colony or a number of them?

MR. KREBS: A number of colonies in both cases mentioned,

DR. MILLER: Do I understand that these men in the same neighborhood have their colonies go in the same way?

MR. KREBS: Yes.

DR. MILLER: Those bees are so thoroughly disappointed that we did not go to San Antonio this year, that they have lost their vigor.

MR. KREBS: I think that is one very good answer to the question; I hope you will all come down to see us.

PROF. BENTON (Wash.): In regard to that question let me ask the time of year.

MR. KREBS: It occurred mainly in the spring of the year, although it seemed to be on certain occasions any time during the summer. But mainly in the spring of the year, from the commencement of swarming or until the middle of June.

MR. DADANT: I would like to ask the gentlemen whether the bees are numbed in any way? Do they seem to have the disease of bee paralysis?

MR. KREBS: Sometimes they have paralysis but in this case there does not seem to be anything the matter only the dilatory disposition.

MR. HUTCHINSON (Mich.): I have had some trouble along this line but it is during the honey dearth. I have never had any trouble of that kind when the bees were gathering honey.

PROF. BENTON: I hardly think the condition mentioned is due to disease but rather more to certain other peculiar conditions. If you examine the bees at this time of the year in any part of the country from here eastward and southeastward, you will find that in a very heavy Aster harvest they fail

and are a little weak for brood rearing, they neglect the queen and do not care whether they have a queen or not. They go queenless often times when the queen is in the hive, yet they are getting honey rapidly and they are in a normal condition, but they dwindle very rapidly if they have not been cared for in July and August, for the simple reason in much of the territory southeastward about here they get very little honey and raise very little brood, and the bees are June-reared. In this heavy Aster harvest they drop off rapidly and peculiar conditions arise. They go into winter quarters with a few old bees and come out poorly in the spring. That is merely the result of getting honey so rapidly late in the season. That is the reason I ask the question. I have had many a man tell me this Aster honey was poisonous to the bees. But on the other hand examine a colony that has been well cared for in the summer, has had a young queen and bred rapidly and you find it strong in bees reared during July and August; they gather the Aster honey in rapidly and the combs at the opening of the Aster harvest being filled with brood are only gradually filled with honey in the interior of the hive, a good surplus is obtained and they go into winter quarters in good shape. But on the other hand a colony without the combs being filled with brood, when the Aster harvest opens, if made queenless, will have very little brood and be very little inclined to accept a queen and gets in a very abnormal condition.

DR. MILLER: He says this is in the spring.

PROF. BENTON: Similar conditions might occur then. This is particularly true of Kentucky, Tennessee, North Carolina, West Virginia, Maryland, and even extending, I believe, as far west as this.

DR. DRUNERT (Missouri): Since I have been working with bees for forty-

five years, both in Europe and here I never had but one inactive hive; that is, they did not work. A neighbor said it was the hive. We examined the hive and there was a fine black queen in there and very few bees, but the bees had not swarmed. I came to the conclusion that the queen was too old to breed and the bees did not get rid of her to get another one.

MR. REINECKE (Kan.): I had a very strong colony; it was during the time when there was not much flow that they acted that way.

DR. BOHRER (Kan.): Do bees when refusing to accept a queen or raise one continue to store honey and fill up the hives?

MR. KREBS: It is not from any careless breeding nor is it from any late flow in the fall. It is after the flow commences in our neighborhood that the bees commence from some cause to refuse to do anything; do not work, do not gather honey, do not accept queens, do not attend to the brood, do not do anything but lie around and die.

MR. HYDE (Tex.): I believe the cause of the trouble is that the bees have got some kind of poison from some poisonous flower gathered from near the river; I think that is about the only answer to the question unless we could examine the bees and know more exactly what the condition was.

MR. GILL (Col.): I am satisfied the trouble is with the food and very likely in the pollen.

MR. HERSHISER: It seems all anybody knows about this particular case is theory, and I move we proceed to the next question.

ASKING FOR HONEY AT HOTELS AND BOARDING HOUSES.

Question: Shall bee-keepers stay at a boarding house where they have no honey for bee-keepers to eat?

MR. CADHOUN (Mo.): I would suggest that we make a preference where they have not and call their attention

to it and thereby extend the sale of our honey.

MR. HAGOOD (Tex.): I believe the best plan would be to eat where they have no honey and always make it a rule to call for it.

DR. BOHRER: There is a better plan than that. I would recommend that we do as the young man did who went see his girl and when invited to take his seat at the table said he had brought a lunch with him. He didn't come there to sponge.

MR. YORK (Ill.): I think if the gentleman went to see his girl his honey was right there.

MR. TYLER (Ill.): I went to register at the hotel and the very first thing the girl said to me was "Have you brought any honey along?"

THE PRESIDENT: Some of us have brought honey with us in the form of our wives and babies.

MR. ANDREWS (Cal.): I have often asked why they did not have honey on the table and they have said the boarders will use just as much butter without the honey as with it.

MR. STEWART (Mo.): I spent two months and a half in one city trying to sell extracted honey to boarding houses and hotels and there was not one out of twenty-five that I could interest in honey. Why? It costs more than the most of the things they buy. It is better than the most of the things they buy. It costs them more to feed their people on honey than any other thing they bought. I believe that is the true reason. They will give you another reason, that the boarders do not like honey.

MR. REINECKE (Kan.): We found it very difficult to sell honey in our section, but we put it up in small quantities and got the people to start and afterwards got them to take large quantities.

MR. NIVER (Ill.): Right in line with this work in connection with the boarding house and hotel keeper who think

it is too costly altogether, one gentleman suggests to me it is a lack of tact. Perhaps, it is, but I had tact enough to convince them on few occasions that it is really as economical as anything they can put on the table. They will buy cheap syrups, but honey being so very rich they take very little of it, and I really believe it is a very cheap and economical food. I am simply talking shop. I don't think the boarding house keeper can be brought to a realizing sense of his iniquities at all; he is incorrigible.

MR. CARY (Mo.): Years ago I asked a hotel keeper why he didn't have honey on the table and he informed me that it was not put up in the same shape as other relishes; he said if it was put up in that shape it would be put on the table. We then had prepared at our expense a decanter of extracted honey, and that hotel today at every meal has those decanters on the table. They said, if we have to buy it in five gallon cans or barrels it would be too expensive to place on the table and to keep the flies away from it. I think if we would adopt a suitable decanter and place a suitable quality of honey therein so that the restaurant or hotel keeper could put it on the table, more of it would be found on our different hotel tables today.

MR. HYDE (Tex.): My wife has been stopping at a boarding house at San Antonio and as soon as they found a bee-keeper was stopping there the boarders began asking for honey and the landlady got onto it and she ordered a case of honey.

DR. MILLER: The question was whether bee-keepers should patronize a boarding house that did not use honey and we have gone to the germane question which is not perhaps strictly out of order, whatever influence we can have upon the public in general in getting them to use honey as an article of daily food will bear upon the boarding house. I doubt very much whether

anything will be gained by making an attack upon the boarding houses themselves. A boarding house will have butter upon the table and if there was none there would be a row right straight because people are in the habit of having butter upon the table at home and wherever they are. Our efforts should be made not upon the boarding house but upon the public in general, and when you get everybody to want to have honey on the table every day there will be no trouble.

MR. SECOR (Ill.): I am not only a bee-keeper but I sell groceries and I make the acquaintance of these travelling men and I make it a point to say, "Boys, if there is no honey on the table, ask for it." And they have invariably done so and I would see the hotel people the next day and say, "Can't I sell you a case of honey?" And the hotel keeper would say, "I don't care if you do. What is it worth?" I would say "\$3 a case, if you return the case in good order." In that way I keep honey in the hotels all the time in my section.

MR. YORK: I believe as Dr. Miller said, the way to get hotel keepers and restaurant keepers to have honey on the table is to have us all call for it.

MR. KREBS: I find you can talk honey any place and any time you please, and people become very much interested. I think a good plan would be to get the people interested.

SHALL MANUFACTURERS PRINT ON THE SECTION BOXES A DENIAL OF THE COMB HONEY CANARD?

Question: Would it not be possible to have all manufacturers print on all sections a denial of the comb honey lie?

DR. MILLER: I can answer that question. Yes. Another question however would come in, do we want to? And another question would be, what

will it cost? If you will tell us how much that will cost we will tell you whether we want to buy sections with that or not.

MR. DADANT: I believe it would be a good thing if we could place on our sections some remark concerning the purity of comb honey, but I doubt that all bee-keepers would want it and it would be difficult for the manufacturer to make sections so that they would be sold right along with that printed on it. It seems to me it would be a great deal better for a label to be made to paste upon the sections. I believe a statement made without a signature or simply bearing the approval of the National Association to the effect that no comb honey is made artificially and sealed with a hot iron as so many people believe, would do a great deal of good. I have had, as a foundation manufacturer, people come to see the manufacturing of honey and wondering why we didn't show them how it was put in and sealed over.

MR. KRETCHMER (Iowa): Some bee-keepers would have it and some would not on any consideration. I refer to something on the sections. It would be a hardship on the manufacturers and add to the expense of it. I think a label put on by those who decide to have it would be preferable to having it printed on the sections themselves.

MR. ROUSE (Mo.): Mr. President, the thought just occurs to be that I would not like to advertise such a thing as a fraud if the other fellow doesn't ask anything about it; but if he does I believe that that little slip you speak of would be the thing to have. I don't believe it would be practicable to put it on all the sections. Some might not desire it at all.

MR. HART (Cal): I would like to ask what is adulterated comb honey? Is it grape juice put into the combs? Is that considered as adulterated honey?

MR. DADANT: I think that the party who wrote the question meant to speak of the so-called manufactured comb honey, manufactured entirely from the comb to the honey, and sealed over artificially.

MR. HYDE (Tex): It was suggested to me and the idea was to have it thoroughly discussed to see if we could not get at some way of refuting this statement. Nearly everybody believes that comb honey is manufactured. Almost the second question that people ask me is something about comb honey, if they ask about it at all; and they ask, how about the manufactured honey? And then they ask "Why is it you sell extracted instead of comb honey?" I don't know whether it would be feasible to have it printed on the sections or not. It seems to me it would be possible to have that done in making the sections. I want to find out a satisfactory way to do it.

The President introduced Dr. Charles J. S. Digges, the representative of the Irish Bee-Keepers to the Convention. (Applause.)

BEE-KEEPING IN IRELAND.

DR. DIGGES (St. Louis): Mr. President and gentlemen, if I were to speak to you upon a subject I am more capable of speaking about than bees it would be cholera or smallpox or something of that sort. I was afraid to allow myself to make any remarks extemporaneously with reference to bees, and I have just jotted down a few ideas on paper and you will excuse me if I read the remarks I have to make.

Having been requested by the Irish Bee-Keepers' Association to act as its representative, it affords me great pleasure to meet you all in convention assembled. I had not the slightest idea such honor would have been given me, and I regret that a better representative, one thoroughly versed in the subject of bees, their minutiae and detail, had not been selected.

A year or two since, through the medium of the Irish Bee Journal, I found that my brother in Ireland was greatly interested in the subject of the Bee Industry, and was editor of the journal of the Association. I happened to see one morning in one of our daily papers something that to me seemed extraordinary, it was an account of the process of making artificial comb or foundation. The article was illustrated by an engraving, and thinking it might be a great help to the bees and allow them to work overtime I sent the paper to my aforementioned brother. I found however, that he knew all about it, and he mentioned several gentlemen in these United States who had either invented or improved on the thing. To try to get even with him I told them of a patent way we have of making hens lay continuously, but he elaborated on that subject so well that I desisted from giving him any more pointers. I have recently in an hour or two learned more about bees than I ever knew before, by reading this little book "The Irish Bee Guide" written by my brother previously mentioned as the editor of the Irish Bee Journal, and I am not surprised that you gentlemen take such an interest in the subject. This little book is the first and only one on the subject printed in Ireland, and I have great pleasure in presenting the President and the Secretary of the N. B. K. A. with copies of the work on behalf and with the best wishes of the author. Receiving every month a copy of the Irish Bee Journal, I find that the bee-keepers there have been sorely afflicted with foul brood. At first, in my innocence, I thought foul brood was some dirty habit or other the little urchins had fallen into, but I find it is something like hog cholera, or lumpy jaw in cattle, and requires extermination. Through this affliction the bee-keepers in Ireland have suffered severely, and therefore felt unable to bear the expense of sending a representative such a distance at great cost,

hence my appointment. I will state that the bee keepers in Ireland have not only the dread enemy of foul brood to contend against but also a department of agriculture, which knowing nothing of bee keeping, has refused all offers of assistance from the I. B. K. A. and appointing instructors in the counties who are as inefficient as the Department itself, are playing tricks with the interests of the industry. The I. B. K. A. is now obliged to introduce a bill in Parliament for the purpose of doing what it is the duty of the Department to do, viz. to combat the disease, which, through the apathy and ignorance of the Department has been allowed to spread through every county in Ireland. The I. B. K. A. for more than a quarter of a century has been promoting bee-keeping in Ireland by lectures, publications, qualifying of experts, and by every other method available. They have co-operative societies of bee-keepers through the counties, affiliated with the I. B. K. federation, which latter, with extensive premises in Dublin, supplies the hives and appliances at co-operative prices to the members and societies and also markets their honey and wax. The Department has worked steadily against every development of the kind, but the I. B. K. A. will persevere in hope that with a change of government the Department may get into better hands and the industry receive more recognition from the Powers that will then be.

In such an evergreen country as Ireland, in fact in all Great Britain, where the fields are green and full of clover and other honey bearing flowers, I may say all the year around, one would imagine the Government would leave no stone unturned to foster such an industry, whose possibilities are very great, and in this connection I will state that the value of honey imported into the United Kingdom in the month of July was \$23,260, but alas, for the bee-keepers, that country does not enjoy a protective tariff or prohibitive, if you will,

In conclusion, Gentlemen, I will state that the editor of the Irish Bee Journal, and author the Irish Bee Guide, the Rev. J. G. Digges, my brother, sends to the Brotherhood here his cordial greetings, and that but for the pressure of work connected with the interests of the craft in Ireland he had hoped to attend in person, and in behalf of the I. B. K. A., I offer sincere thanks for your exceedingly kind invitation to be represented at this most distinguished assemblage, and pledge the assistance of the old Country Association in any measure that may be advantageous. I also assure you that if any of the members of the N. B. K. A. find your way across the pond the I. B. K. A. will give you a Caed Mille Failthe, or in plain English a hundred thousand welcomes.

DR. BOHRER moved, duly seconded, that the paper read by Dr. Digges be placed on file, to be incorporated in the proceedings and that a vote of thanks be extended to the Irish Association through their representative.

The President put the motion which, on a vote having been taken, was declared carried.

PRESIDENT: I wish to thank Dr. Digges on behalf of the Secretary and myself for the present he has made to us in the way of these beautiful books on the Bee Industry in Ireland.

DR. DIGGES: I am heartily pleased with the reception accorded to the Irish Bee-Keepers' Association through me. I merely reiterate what I previously said that if any of you take a little trip and go over there you will see some bees if the foul brood has not exterminated them.

On motion the Convention adjourned until 2 o'clock p. m.

SECOND SESSION.

At 2:00 o'clock P. M. the President called the convention to order.

On motion of Mr. Pressler, duly seconded, the Chair appointed Mr. H.

H. Hyde (Texas) Sergeant at Arms, and Mr. E. E. Coveyou as his assistant.

Mr. Vandyne (N. J.) moved, seconded by Dr. Bohrer (Kan.) that this convention offer \$1,000 for two boxes of honey $4\frac{1}{4}$ by $4\frac{1}{4}$, adulterated or unadulterated, manufactured, filled, and sealed over by human hands or machinery within one year from this date; and that we authorize and require every member of this convention to have this offer published in their Country Newspaper in each state represented here to-day.

Mr. Kretchmer, (Iowa), moved, seconded by Mr. Pressler in amendment that the publication shall be without cost to this Association.

Mr. Vandyne, with the consent of his seconder accepted the amendment.

MR. CARY (Mo.): I offer an amendment that in the publishing of the reward that mention be made that the object of the reward is to convince the public that there is no such thing as manufactured comb honey.

DR. BOHRER: I would suggest instead of saying "manufactured honey" we say "manufactured honey combs."

MR. CARY: I accept the correction.

MR. HERSHISER: What is the object of limiting it to $4\frac{1}{4} \times 4\frac{1}{4}$?

MR. CARY: It occurs to me some of the manufacturers might be making sections of other sizes.

MR. E. T. ABBOTT (Mo.): This seems to me a pretty serious thing and I do not like the shape the resolution is in because it is suggestive that it is an inducement to some one to do it. I move that the entire matter be referred to a committee who shall report at a later time.

MR. DADANT: I second the motion.

MR. VANDYNE: I hope this resolution will not be buried.

MR. DADANT: I wish to say this is a serious matter. A number of prominent bee-keepers have asked us to bring this matter forward for discussion, and

for us to vote on this question at present is too premature. The motion is all right only we want to be careful how we word it and what we say. That is why I second the motion to refer this to a committee until we can have a good discussion.

DR. MILLER: I have attended a good many meetings of the National Association and I never yet knew any matter to be buried in a committee and I don't believe there will be any trickery of that kind. I am very sure after hearing the motion, that some changes should be made in it. I certainly hope it may be referred to a competent committee and time taken upon it.

MR. DIEBOLD (Ill.): In my opinion the whole thing is out of order. I believe in letting the whole matter rest as it is.

PROF. BENTON: Mr. Abbott brought forward one idea I should like to emphasize because it has occurred to me in the same fashion time and time again. Whenever this has been brought forward it has been brought forward as a reward. We do not want that thing accomplished, therefore it should not be a reward but a forfeit, distinctly, provided the thing can be done. (Applause.)

The President put the motion to refer the matter to a committee, which on a vote having been taken, was declared carried, and the following committee appointed;—Messrs. Pressler, Kretchmer, Gill and Abbott.

APPOINTMENT OF COMMITTEE ON NATIONAL LEGISLATION.

MR. HERSHISER: This is a pretty large country and the bee-keeping interests are varied and occupy a good many portions of it, I therefore suggest that the personnel of this Committee be distributed throughout the various sections of the country most interested in bee-keeping, and who would have the greatest interest in National legislation upon the subject.

Mr. Hyde moved, seconded by Mr. Abbott that a committee of seven be appointed.

MR. DADANT: I rather object to the number of seven; I have been on committees where the discussion had to be by correspondence and when there are seven it is slow work. The less the better. Of course it takes at least three for a committee. Ordinary politeness requires we should hear from every member when there are seven and seven are too many. I move we amend this motion to three.

MR. HYDE: I accept the amendment, with the consent of my seconder.

The President put the motion, which, on a vote having been taken was declared carried.

The President appointed Messrs. Ferry, (N. Y.), Marks (N. Y.) and Dadant, Ill.

THE PRESIDENT: The reason I appoint these gentlemen is because they are near the seat of war and I know Mr. Ferry especially will take things upon his shoulders and I know they will move.

MR. HERSHISER: There are a good many ideas that present themselves to a person but I would like to make a suggestion for the consideration of the Convention and that is that the President, General Manager and Secretary of the Association be ex-officio members of this committee, because their official position might push it along a good deal. I will make a motion to that effect.

MR. ABBOTT: I second that.

Mr. Hershiser put the motion which on a vote having been taken was declared carried.

MR. ABBOTT: I saw Dr. Wiley yesterday and asked him about our National Pure Food Bill and he said it was up before the Senate for consider-

ation sometime I think about the 8th December, and he says if it passes the Senate we are all right.

Appointment of a Committee to the President of the United States Setting Forth the Needs of this Industry.

Mr. York moved, seconded by Mr. Hershiser that the Board of Directors be a committee to prepare an address, properly signed by the Executive and forward it to the President of the United States.

The President put the motion, which on a vote having been taken was declared carried.

READING OF PAPERS.

The President called upon Mr. York to read a paper on the subject of "Advertising and Selling Honey" and stated that Mr. York was so well known he needed no introduction to the bee-keeping industry of the United States.

MR. YORK: When the Secretary, Mr. Brodbeck, who unfortunately cannot be here, wrote me saying that he wished me to write a paper and to select my own subject I rather declined because I had been on the program so often. However, he insisted on it and I suggested the subject of "Advertising and Selling Honey" and so I have prepared this paper on that subject.

ADVERTISING AND SELLING HONEY.

Advertising, in these latter days, has become almost a science as well as an art. To the business that hopes to be successful advertising is a necessity. While in some instances it is rather expensive, it must be indulged in, and that liberally and constantly.

Advertising as applied to honey as a table article has never been attempted in more than an occasional and very limited way. There has been no systematic, businesslike application of modern methods of acquainting the consuming public with the value of honey

as a daily food. Its medicinal, health-giving and health-keeping qualities are also less known than they should be. But just how to initiate a propaganda of advertising that shall interest consumers in honey in a manner mutually helpful, is a great question. However much I might desire to be the modern Moses to lead you through this wilderness into the Promised Land, I fear I shall fall far short of attaining such coveted honor. But there must always be a beginning, and some one who shall start. And I may as well be the one who attempts to blaze the way, even though I fail to reach the desired goal of success.

In the first place no plan of advertising honey that would promise results can be inaugurated without the expenditure of cold cash. Yes, and lots of it. It takes capital nowadays to do things—to accomplish objects worthy our civilization and people.

In my humble opinion, the National Bee-Keepers' Association can undertake and continue an advertising campaign to increase the general demand for honey, better than any of other organization, firm or individual. The Association stands for all beedom. What it does should be in the interests of every one who produces honey, and not alone for the benefit of its members. We need to get rid of a whole lot of the selfishness that seems to be on board in some quarters. Only he lives truly, or in the highest sense, who helps to make the pathway easier and brighter for others. No one liveth unto himself, no matter how much he thinks he desires so to do. We are all dependent upon our neighbors whether we realize it or not. And so in advertising honey, it will benefit all producers as well as consumers.

I have believed for many years that the reason why the price of honey is so low, is because of the unequal distribution, and under consumption. I know some think that the trouble is over-pro-

duction and stagnation of the principal markets. But once let the dear public know—or be assured—that they can get the pure honey every time they buy, and also impress upon them its great value as a food, and there wouldn't be enough honey produced in all the world to supply a quarter of the people, and at a good price.

I know there are a few among us who are advising bee-keepers to "*keep more bees.*" I suppose one idea is to keep more bees, to produce more honey, so as to buy more bees and bee-supplies, and then keep more bees to produce more honey, etc. My theory is to advertise the uses of honey so that what is *now* produced will bring a higher price. Then if a bee-keeper decides to keep more bees to produce more honey he will also get a great deal more money for his crop, and so be better paid for his labor, and receive better returns for the capital invested. I doubt not more rapid progress will be made if the advertising line be followed for awhile, than to attempt to keep more bees so as to increase the flood of honey to be sold at a bargain-counter price. Why, honey should bring at least 50 per cent. more per pound in the markets today than it does. But the *demand* must be increased in some way. My "*some way*" is by advertising—letting the people know the truth about honey.

Again, the untrue statement that comb honey is manufactured—which was started in 1881—still goes “marching on,” and is yet dealing its dreadful death-blows to the honey business. I believe the only way ever to “nail that lie,” is for our National Bee-Keepers' Association to *advertise*—give the public the facts about honey for awhile. Very soon, I am sure, the newspapers would “catch on,” and the good work started through such advertising would be kept going, so that in a few years the evil effects of that misrepresentation about comb honey would be counteracted; and

when that happy day is here, there will not be enough honey produced to supply a tenth part of the demand, and at good, paying prices to the bee-keeper.

Further, I would have our National Association to urge bee-keepers everywhere to endeavor to get their local newspapers to publish information about honey. The Association could prepare such matter, and begin by getting its members to use their influence to have it published as widely as possible. Then the bee-papers would undoubtedly do all they could to have their subscribers do likewise. With such united effort who doubts that a great demand would soon be created for honey—a demand that would take every pound of honey produced, and at a good price?

The satisfactory selling of honey that will naturally follow the proper advertising of the same, presupposes a high-grade article and suitable retail packages. Of course, comb honey will ever be retailed by the single comb. Extracted honey, whether in liquid or granulated form, must be in convenient-sized packages. And all, whether comb or extracted, should bear the brand or stamp of absolute purity, and that in such a manner as to imply an undoubted guaranty of the same. Once get it drilled into the heads of consumers that there is no such thing as machine-made comb honey, and that the purity of the extracted article can be relied upon implicitly—then there need be no further worry as to profitable prices, or as to finding an outlet for your crops of honey, no matter how large in quantity they may be.

It is possible that a final and satisfactory solution of the advertising of honey by the National Association may include an Association brand. But I imagine a snag will be struck here that, if not properly safeguarded, may cause more trouble than benefit. I am not clear as to the Association brand business. It might be a good thing. I don't know. Perhaps a careful, competent

committee to pass upon granting permits after examination of the credentials of an applicant would be the best way to do it. But as there is no uniformity of grading on the part of producers, and no very universal agreement as to taste or honey-flavors this whole matter of an Association brand becomes a very complex one. Of course the assembled wisdom of this body may evolve something tangible and adequate out of the chaotic condition that exists. If so, we can swing our hats high with huzzas of victory. But let us make haste slowly in this matter, lest our latter end be worse than the first.

In conclusion, I want to urge a thorough discussion of the advertising of honey. It is worthy the best brain in our ranks. It is also entitled to a fair trial, I think, provided the Association's funds will warrant it. But I have no doubt many who deal in honey would be glad to co-operate, and surely every commercial honey-dealer in the land will be only too eager to lend a hand—and also pay a few dollars annually—in order to get the honey-advertising campaign properly launched. For its beneficial results will be to all who have, for marketing, either few or many pounds of the sweet product of the bees.

MR. BROWN (Cal.): I would like to mention a point Mr. York brought out regarding the protection of our extracted honey and our brand. The adulteration of extracted honey is something that is carried on largely. I have seen great quantities of it. I have seen honey that has been fixed up for the market and put in five gallon cans, put back into the original package and marked Pure California Honey, where there was from 40 to 60 per cent. of glucose in it. I know those things are done in our large cities in the west and middle west and I know it is done in Kansas City, and I am pretty sure it is done in this city. Our honey that goes on to the market in car load lots today ends up with the consumer

largely adulterated. The man who consumes our article does not know what he is using. It doubles the output and destroys the flavor; it ruins its demand. I think it is time we should take steps to protect our honey.

With reference to the matter of a brand the Central California Bee-Keepers' Association, of which I am manager at present, has adopted the brand and in the manufacture of our boxes we have the brand printed in the box. It says "Central California Honey Producers' Association. Pure extracted honey." The question is how we can guarantee that the goods put up in our packages are pure when they reach the consumer. A man might receive a quantity of our packages and adulterate his honey just the same as they do now and sell under our guarantee. In order to overcome that difficulty we have agreed upon this, we are going to have our honey sealed. First, however, it will be graded by an official grader appointed by our Association for that purpose and every can of honey that is in a case will be sampled. A sample drawn from every can and placed in a small bottle. In the manufacture of the cases we have ordered that a hole be bored in the partition of the box about three inches deep to insert our bottle in which we have placed the sample. We take out the sample and place that in the little bottle and slide it down in the hole. Then when the honey is thus graded by our official grader each can has to be sealed with the Association's seal. Our goods will be protected by a guarantee and the guarantee will be printed and wrapped around the bottle in the hole. Now, any man buying a can or package of honey coming from Central California with the seal broken will naturally have to take his own chances of that product being pure just the same as he would any other goods protected by seal; and any man who wants to be sure his goods have not

been tampered with will find the seal intact and buy nothing else. We will have to protect our honey unitedly through our Association and I believe through the National something will develop before this convention closes that will bring about this line of work.

MR. CALHOUN (Mo.): I think there is something practical in Mr. Brown's talk in regard to giving a guarantee of the purity of our honey.

Now, with regard to another feature, the bringing before the people the advantages that are to be found in using honey from a medical and food standpoint. How shall we educate the people up to a knowledge of the advantages of honey in this regard? I believe we should have a concise article covering these points. I believe we can afford to have that article printed for our use and as Mr. Brown has suggested with a sample going with each case of honey. I, for one, could afford to go to my local printer and have slips printed bringing forth these advantages and put one in each package of honey I sold.

MR. DELONG: Mr. President, gentlemen and ladies, I would like to make a suggestion in regard to getting a label or advertisement of our honey as a pure article. I have produced a great deal of extracted honey in Nebraska, and I have sent a great deal to Lincoln to personal friends, and I can sell thousands of pounds in Lincoln of my production. I tell my parties if they ever have any trouble in selling it on account of being accused of its being adulterated to let me know and I would go to the experimental station at Lincoln and have them run an announcement on the purity of this honey. All I would have to do would be to pay the official authorities for the certificate. I think that would be an authority which a counterfeiter would not get. That is the way I am going to work it in Nebraska if I have any trouble.

DR. MILLER: Mr. President, I am sure that we have struck one of the most important questions that can come before this body and that is the advertising of honey. I dislike to attempt to say very much about it because I feel that all my thoughts are in a somewhat crude condition but it is worth while for us to talk it over at least a little, and perhaps we can have our thoughts crystalized a little before we are through with it. Take the case of the Karo Corn Syrup. We can reasonably suppose thousands of dollars are spent in advertising that syrup—I am not paid anything for advertising it here—that is done probably by men of good business sense and they are not doing it for fun; they are spending their money because it pays; if it pays to have that advertised it will pay us to have such an article as honey advertised. I believe it comes fairly within the province of this Association to do something towards advertising honey.

Only a very few points that look somewhat clear to me: one is the expense of the matter. We need a larger membership to do what we ought to do in that regard. There comes that matter of the brand, and I suspect we will strike a snag when we come to that. But there is one thing that may be said in favor of anything of that kind; if we want a brand and if that brand is good for anything—and it ought to be good for something—every bee-keeper will be likely to want to have the advantage of that brand, and that should be in such shape that only the members of the Association would have the benefit of it; the advertising would be for the benefit of all. If we could do it just as well, I should say let everybody have the benefit of it. So far as any brand is concerned that would have to be limited and that would help to do a larger amount of advertising.

I believe the time has come for this

Association to spend perhaps the greater amount of money that it has to spend in trying to inform the public as to the matter of honey, its quality and all that sort of thing. The things you want people to know.

MR. REINECKE (Kan.): We find so many medicines and other things where they have their own signature where they want to build up a reputation, and the signature counts. I would suggest with us that that would go a great way.

PROF. BENTON: Mr. President, the suggestion of Dr. Miller that the time has come when the Association should spend most of its money in advertising honey, making its qualities known and what it is good for, brings to my mind some work I have had in mind to do in connection with the position I now occupy in connection with the Department of Agriculture. I was asked by the Secretary to prepare a paper which I have done, and I might have had some allusion in that paper to this work in a general way, but I will forestall that by making the statement. It has been suggested to me to prepare a farmers' bulletin on honey and its uses. That is simply one of the smaller publications of the Department; it may be but a leaflet or may extend to sixteen or thirty-two or forty-eight pages and it comes within the limits of a certain law enacted by Congress which forbids the issuance of more than 1000 bulletins if that exceed 100 pages. This comes within the limit in number and can be printed up to 50,000; a bee-keeper can ask for a thousand copies for aught I know and he would get them absolutely free of cost. If this Society will suggest some person to prepare such a bulletin and submit it to me or would desire I should prepare it I am perfectly willing to do so and have it printed at the Department or under the Department's expense and sent out to any list that might be forwarded there or in quan-

ties to the individuals themselves.

MR. HAGOOD (Tex.); I don't think our advertising would strike the vital points in this thing from the fact that the other man has just as good a right to advertise as we have. We need legislation more than we need advertising. In my neighboring town there is syrup sold there under the head of honey, put up by the manufacturing company of this town with a little piece of comb in it and it looks as nice as can be. Those people have a right I suppose to advertise and when we go to advertise we put our goods on the market against theirs. It seems to me we should have legislation.

Dr. Miller moved, seconded by Mr. Pressler that Prof. Benton be requested to prepare such a bulletin as he suggests and have it put in the list of Farmers' Bulletins.

DR. BOHRER: I hope the motion will prevail; I think that is striking the key note. All the advertising we can do is not going to compel men to cease the adulteration of honey either extracted or in the comb, and if the language as it is shaped in the paper that is read was to go to the public in that way it would withdraw the offer of \$1000 for a section $4\frac{1}{4} \times 4\frac{1}{4}$ of honey-comb manufactured and filled with adulterated honey and sealed by human hands.

PROF. BENTON: The idea of the bulletin would be to state the various uses of both comb and extracted honey — anything that would educate the people in general.

The President put the motion, which on a vote having been taken was declared carried.

MR. ABBOTT: I like this idea but I want to get at it a little quicker and before I make a motion let me explain why. I, myself, and many of those who publish papers write letters by the thousand. If we had a little leaflet of about two pages we could stick one in every letter we write and all

the people would get something about honey without the cost of a nickel.

I move, seconded by Mr. Dadant, that it is the sense of this meeting that the Board of Directors of the National Association be by you requested to prepare such a circular and furnish them free to anybody who will distribute them in any way they see fit.

Mr. Cary (Mo.) moved to amend the motion by restricting the free distribution to the members of the Association.

PROF. BENTON: Since this is put forward in connection with this subject of a Farmers' Bulletin on honey and its uses, I would like to say in making this suggestion to the Society I did not wish for a moment to have anyone suppose that was intended to cover the whole ground, but such work as that which has just been suggested is along the same lines, and would be merely supplementary, or my work would be supplementary to that.

MR. ABBOTT: Yours would be the higher grade of work. This would be elementary

The President put the motion which on a vote having been taken was declared carried.

MR. HERSHISER: There is one method of advertising the use of honey and doing away with the superstitions of people with reference to bees that I think I can speak of, inasmuch as I was not the originator of it; that is the methods that are employed in the city of Buffalo in the common schools. For a good many years the seventh grades have been assembled in such numbers as would be convenient to speak to in the lecture rooms of the Buffalo Society of Natural Science to hear talks upon bees and birds. Supplementary to these the children are required to read a certain book on birds and bees and they are given a talk of one hour on these subjects. I have given these talks for a number of years and pre-

vious to last year the talks were very unsatisfactory because the children were expected to go and hear these talks at some hour outside of school hours. I suggested it should be made part of the school work and since then the teachers have accompanied the pupils to the rooms and it has been very satisfactory. These talks give the very best possible opportunity to a person well qualified to speak upon the subject of showing all about honey and bees. I use just an ordinary hive of bees—an observatory hive—to interest the children. Then I show them a few of the most useful implements, a smoker, bee veil, a honey knife and show them how honey is extracted, and this honey they can buy upon the market is nothing but pure honey taken out of the comb. You also have the opportunity of saying to the people and warning them to never buy honey that has a little slice of comb honey in it because it is almost sure to be something that is adulterated, although not necessarily so. You can also do a great deal towards showing that this story about honey being manufactured by human ingenuity is also untrue because you can show them no two combs are alike and if they were manufactured by machinery they would be uniform. If you tell them to observe when buying honey that the combs are all different in some respects, it is an education they will not easily forget. In making these talks to the seventh grade children you will observe that it will only take a few years until every family knows about bees. The children go home and say they have had an interesting time—not that I can interest them so very much—and the teachers of the pupils are there with them, and they are very much interested; and you will be surprised at the amount of ignorance or want of knowledge that these people who are well educated possess. Even the Superintendent of schools at Buffalo who was present on

one or two occasions asked one of the most ridiculous questions.

MR. DIEBOLD (Ill.): I would like to suggest in regard to Dr. Miller's proposition the manager of the Association be employed to copyright the label and that would protect the Association in its works and in order to get money let the Association tax every member five cents a colony towards paying the expense.

MR. WOODS (Ill.); In regard to the expense of advertising I am satisfied that if the Association gets up a suitable paper that nearly every member of the Association can have it published in their own home papers and the papers around them. That would be one means of spreading it very largely with no cost. One point we will have to look at, when we give an article to a reporter, is to see he does not cut out the good things or make an alteration.

Mr. Dandant, seconded by Dr. Bohrer, offered the following resolution: Resolved that the National Bee-Keepers' Association in Congress assembled send their congratulations to the Pure Food Congress for their labors on behalf of pure food and hope they may be successful in procuring pure food legislation.

The President put the motion, which on a vote having been taken was declared carried, and appointed a committee of three to present the resolution to the Pure Food Congress consisting of Messrs. York, Pressler and Rouse.

The President called upon W. Z. Hutchinson, of Flint, Mich., to read a paper entitled "Bee-Keeping as a Business."

Mr. Hutchinson presented the following paper:

BEE-KEEPING AS A BUSINESS.

In reply to the query, "What will best mix with bee-keeping?" I have always replied: "Some more bees." When the conditions are favorable, I am decidedly in favor of bee-keeping as a

specialty—of dropping all other hampering pursuits, and turning the whole capital, time and energies into bee-keeping. If bee-keeping cannot be made profitable as a specialty, then it is unprofitable as a subsidiary pursuit. If bee-keeping must be propped up with some other pursuit, then we better throw away bee-keeping and *keep the prop.*

General farming is very poorly adapted for combining with bee-keeping, yet the attempt is probably made oftener than with any other pursuit. There are critical times in bee-keeping that will brook no delay, when three or four days or a week's neglect may mean the loss of a crop; and these times come right in the height of the season, when the farmer is the busiest. Leaving the team and reaper standing idle in the back field while the farmer goes to the house to hive bees, is neither pleasant nor profitable. Drawing in a field of hay, while the bees lie idle because the honey has not been extracted to give them storage-room, is another illustration of the conditions with which the farmer-bee-keeper has to contend. The serious part of it is, that the honey thus lost may be worth nearly or quite as much as the hay that is saved. Some special lines of rural pursuits, like winter dairying, or the raising of grapes, or winter apples, unite with bee-keeping to much better advantage than general farming; but when bee-keeping is capable of absorbing all of the capital, time and energy that a man can put into it, why divide these resources with some other pursuit? It has been said that bee-keeping is a precarious pursuit, that it cannot be depended upon, alone, to furnish a livelihood; and, for this reason, it should be joined with some business of a more stable character. It is true that there are many localities where there is often a season in which little or no honey is secured, and, in the Northern States, winter-losses are sometimes very heavy, hence

it would be risky to depend entirely for a living upon keeping bees, in a *limited* way, in such localities; but, if the average profit from bee-keeping, one year with another, is not the equal of other rural pursuits, why keep bees? The truth of the matter is that it is *greater*; and if bee-keepers would only drop everything else, and adopt methods that would enable them to branch out and keep hundreds of colonies where they now have dozens, they would secure enough honey in the good years to more than carry them over the poor years, and thus not only make a living, but lay up money.

When a man decides to cut loose from everything else, and go into bee keeping extensively, making it his only and his life-business, the question of all questions is that of locality. There are few localities in which a small apiary might not yield some surplus, but when a man is to make of bee-keeping his sole business, the securing of the best possible location is time and money well spent. What a good, solid foundation is to a "sky scraper," a good location is the building up of a successful, extensive bee business. Having settled in a locality, the bee-keeper cannot study it too thoroughly. Especially must he understand its honey resources; the time when each flow begins, its probable duration, its quantity and character. He must know whether to expect a spring-flow, like that from dandelion, hard maple; or fruit bloom, that will build up the colonies for the main harvest that is to come later. If there is likely to be a season of scarcity between the early flow and the main harvest, it must be known, and preparations made to keep up brood rearing by means of feeding or the uncapping of honey. The management will depend largely upon the source of the main honey-flow, whether it be raspberry, clover, basswood, buckwheat, alfalfa, sage, or fall flowers. Whatever the source, the bee-keeper must know when

to expect it, and plan to have his colonies in exactly the right condition to gather it when it comes. This is one of the fundamental principles of successful bee-keeping.

Having secured the most desirable location, the next step is to procure the best kind of bees that can be obtained. There are several different varieties of bees, each with its peculiarities, but, aside from this, every bee-keeper who has had experience with several strains of the same variety, knows that some strains are superior to others—that there is scrub-stock among bees, just as there are scrub horses, cattle, sheep and poultry. With scrub-stock, the cost of hives, combs and other appliances remains the same; it is no less work to care for such stock; and it requires the same amount of honey to raise and feed it as it does the best stock in the world. In proportion to its cost, no investment brings the bee-keeper greater profit than the securing of superior stock.

Having secured a good location and good stock, the bee-keeper should adopt such hives, implements and methods as will enable him to branch out, establish out-aparies, and keep a large number of colonies. At the present time the greatest failing of professional bee-keepers is the keeping of too few bees—of clinging to some other hampering pursuit. Many keep enough bees to furnish them a fair living in a good season, but when winter losses, and poor honey seasons follow one another in quick succession, there is suffering, or, at least, great inconvenience. If a man is going to follow bee-keeping as a profession, his only hope of success is in a good location, a good stock and the keeping of bees in such numbers that when a good year comes he can pile up the honey ton upon ton—enough to keep him several years. The larger a business the more cheaply can it be conducted in proportion to the results; not only this, but the very fact that bees are scattered about in out-aparies several miles apart, adds to the certainty of the

crop; as one locality often yields a fair crop while another a few miles away yields nothing.

It has been urged against bee-keeping as a sole pursuit that, while it keeps a man very busy during the summer it leaves him idle in the winter. Bee-keeping, rightly managed, will keep a man busy every day in the year. Too many bee-keepers fail to realize that the selling of a crop is fully as important as its production. The business part of bee-keeping has been sadly neglected. No set rule can be given as to how a man shall dispose of his crop, but it does seem like very poor business management to send away a crop of honey to some commission merchant, and then sit around all winter when good wages might be made selling honey direct to customers, or to retail dealers. The selling of the crop, and the preparations for the coming season may well occupy a man during the winter.

It should be understood, however, that bee-keeping is not an occupation in which one can easily become *wealthy*. In this respect it is much like other rural pursuits. Rightly managed, in a locality adapted to the business, it can be depended upon to furnish a comfortable living, and perhaps enable a man to lay up a few thousand dollars, but such fortunes as are amassed in merchandising or manufacturing can never be hoped for by the bee-keeper. Fortunately, however, the perfection of a man's happiness bears but little relation to the size of his fortune; and many a man with the hum of the bees over his head, finds happiness deeper and sweeter than ever comes to the merchant prince with his cares and his thousands.

(Applause.)

MR. MILLER: I would like to ask Mr. Hutchinson, through you, Mr. President, what number of bee-keepers would be left in the field if all are to be driven out except those who made a whole business of it?

MR. HUTCHINSON: I don't know how many there would be left. There

probably would not be very many. There might possibly be 200 in the United States. I would make that guess.

DR. MILLER: About that time will he tell us what would be the subscription price of the Review? (Laughter.)

MR. HUTCHINSON: The subscription price of the Review, if it were published, would be the same. There might not be any Review. But there might be a time when there would be enough sole bee-keepers who could afford to pay to have such a paper printed.

MR. HARDY (N. Y.): I believe, brother Hutchinson is very severe in his paper. I, for one, think I am the hardest hit in that paper because I am engaged in three or four different businesses. I am not only a farmer of 220 acres, but also a commercial photographer—what I call an expert—I get the very best furniture factories to photograph work for agents samples; I am also a bee-keeper. It all depends in my estimation, on conditions. Conditions have a great deal to do with a man's business. We may be successful bee-keepers and also run another business, in my estimation. Conditions alter cases. I started in the business three years ago. My father was one of the old school. I was in Syracuse, N. Y., in the photograph business. On the death of my father I went home. Mother had eighteen swarms of bees in Langstroth hives in very bad condition; my sister had taken care of them for two years. They were in a weakened condition, full of worms. I said I believe I can run these bees. My mother says, You will never make a bee-keeper; your father said you were afraid of them and did not dare to go into the yard. I said that I would like to try it. In the first season I took eighteen swarms and sold \$154 worth of honey from them and I had a little honey to give away and got \$100 for thirty-four swarms. The

second year I did \$750 worth of commercial photographing and the farm turned about \$2750, and that year I bought bees and sold \$262 worth of honey. This summer since the 10th day of June my bees did not get ready to swarm and at the shaking time my photographing season came on. Since the 10th day of June up to the present date I have made \$592 from photographing, and turned out two ton of honey from 70 swarms. I have been such a busy man I have not attended to two or three letters that brother Hutchinson has written to me about the New York State Convention, and not only that but I have neglected to send him a renewal for the Review for the past year because I did not have time to read it.

DR. BOHRER: I don't know exactly the object of a paper of that kind at this time before a Convention of this character. I am sure that my feelings have always been in the direction of disseminating all knowledge and information possible among the people concerning the habits and scientific management of the honey bee. I believe that with all we can do there is not any danger of there ever being an over-production of honey. We want the proper legislation and the character of some of the resolutions that have been adopted here today were of that tendency. That is pointing in the direction of wholesale legislation that will protect, not only the bee-keeper, but his product, as well as the consumer. I would make a terrible fight before a legislative committee if it was intended I should abandon the pursuit of honey making.

If it is the aim and object of this paper to discourage the dissemination of knowledge as to honey and honey bees I am opposed to it.

DR. MILLER: In sober earnest I do believe that the general welfare of the public demands to a certain extent that bee-keeping shall be specialized. If it

goes no further than to have a farmer keep a few bees—and I am not saying anything against that either—if we are to limit it to that there will not be the advancement made that there is. I believe the more it is specialized the more likely we are to have a larger amount of honey produced; the larger amount the better it is for the nation. If we can get it and have it used largely as a matter of every day diet we are doing the public a benefit. So that I believe Mr. Hutchinson, although he is crazy about having his paper supported if he has only half a dozen subscribers, is doing a good thing in urging that bee-keepers keep a larger number of bees.

MR. ABBOTT (Mo.): This bee-keeping as a specialty is a dream that we have been dreaming for a long time and while these brethren have been dreaming that I have been trying to educate the farmer to keep bees, and I have been publishing a little paper that goes to that class of people and it talks to about 20,000 of them every month and that class of people buys about \$25000 worth of supplies from the first of January to the end of the season; and if you think you can eradicate that class of bee-keepers who can buy \$25000 worth of bee supplies and with something like 4000 of them supporting a paper that believes in bee-keeping and general farming you will make a serious mistake. This is kind of talking behind the scenes and giving a little private business but I want to tell you the farmer bee-keeper is here to stay and there is a whole lot of him too.

MR. HUTCHINSON: If bee-keeping would be advanced by doing away with the Bee Journals I would be willing to step out and do something else.

MR. RHEES (Utah): As a specialist in bee-keeping I am not at all opposed to the farmers keeping a few bees but I would discourage farmers keeping

bees without knowing anything about bees. Anyone who will encourage a man to buy a few colonies of bees in order that he might have a little honey, without encouraging him to know something about the habits and diseases of the bees, is doing a great injustice. We spend a lot of money in keeping our yards free from disease that is spread by these people who do not know how to keep bees. I believe that the farmer can raise his own honey if he wants to. I would like to see him do it; at the same time I would like to see him become familiar with the habits and diseases of the bees so that by keeping a few bees he would not do a great injustice to his neighbors who are trying to make a living by bee-keeping. In my locality I am getting my living from bees. I have run a thousand colonies and over for some time and always succeed in getting enough to live on.

MR. CALHOUN (Mo.): Mr. President, I really owe it to Dr. Miller there, that I am to-day able to put on the market 15,000 pounds of honey this fall and 10,000 pounds last year, but I am not a specialist. At our National Convention at Hamilton, Ill., several years ago I asked the question—I was feeling my way—if there was anyone in the Convention that had made any money out of bee-keeping, if it landed any of them at the bank; that was what I was looking at. At that time I was a mechanic, a blacksmith, and I was making a living at the farm, and I knew how to raise corn and hogs and pumpkins.

With regard to the brother's paper I am glad he has brought the subject before us. It puts us to thinking, and I believe that we are apt to get the wrong impression from his paper. Because men make a specialty of telling us how to farm does not say that the general public shall not farm and I believe in having specialists in the bee business to go on and tell us what to

do but that does not cut us off from doing that thing.

Conditions change and nothing takes place until the conditions get ripe for that. Honey ought to be shipped out of our country by the car load just like wood and corn. All over Missouri honey ought to be shipped out by the car load. When I was a boy I was ashamed to go to town with a basket of eggs simply because there wasn't a demand for them. Why? The idea had not obtained in the minds of the people that eggs could be shipped successfully and the machinery had not been gotten up to make packages so that the eggs could be shipped to market. I remember when they used to take oats and bran put the eggs in it and haul them to Hannibal and of all mixtures you ever saw when they got there, they had it. Now conditions have changed and I thank God specialists have gone forward and shown us we can put up our honey in a marketable condition so that we can put up our productions together, send them to the market and get a market price for them.

Some say, how are you going to sell this honey?

Last year I called their attention to this fact that there is no one so far from market as he who has nothing to sell. I am interested in the producing part of the honey season to produce the honey and between times in the winter I can sell what I have produced. I go right around among the retail merchants in the large towns and I go around in the outskirts and I take their order for so many cases of honey. I go to some wholesale man and say, here is an order for so many thousand pounds of honey, can't you handle a few thousand pounds at that price throwing in this order with it? I sell to the wholesalers by the tons that way. The conditions are ripe for every farmer to produce honey so that there will be a market in our towns

for shippers to the great markets of the world. I am glad we have specialists, specialists in the line of bee journals and specialists in supplies to put it into marketable shape. I believe the time will come when we will take our honey to the towns and there will be a place there to sell it as we do our eggs and butter. I believe we really lose sight of the real worth of these bees over the world. I believe we have our eyes on the central benefit of bees and that is the production of honey. If I understand from the writings of these men in their journals they hold that the primary work of the bee is to fertilize the flowers and we are getting our minds upon this central fact, the production of honey, and we are getting a better class of farmers; they are gaining and you are going to find out they do not have to be specialists in the way of producing honey. The time was when I was a boy that if we had a boy that we couldn't make a doctor or a lawyer out of him we would say, "Give him a mule and plow and let him go out and plow the ground." The conditions are changing. The time is coming when we are going to see that the brains will be kept on the farm, for if we need medicine we have gone forward and put it up in packages, if I need a cathartic I can go to the mediocre and say, "Give me a package of it." The time is coming when we can see that the farmer will be an intelligent man and he will go in partnership intelligently with God and that is what they are going to do; and he won't be a one-eyed man, that is, simply raise hogs and corn; he will be able to raise everything that is produced on the farm. Raising honey is intimately connected with farming. Let this brother be a specialist that is a specialist indeed. If you are manufacturing goods put them in marketable shape for the least money you can furnish them at. There is no such thing as laws of nature, it is divine

action. I want to say we get very closely in harmony with Divine action when we touch mother soil. Try, if you make a failure, all right. Look at the olden days when they tried to convert the baser metals into gold what they brought to us? They brought mother chemistry. Look at her children today. Look at Columbus when he tried to open the back door to India. It was a miserable failure but he has thrown wide open the portals of America. If you meet with success go on; if you fall down, get up again and get stronger. (Applause.)

MR. DELONG: I am an enthusiastic bee-keeper. I am like the brother who said, "I don't believe nobody can get me to quit keeping bees; they might hang me but I am not a coward." How brother Hutchinson's paper did scorch me. Perhaps I didn't get at it right. I want to say to brother Abbott—I have known him a long time—if the whole lot of the farmer bee-keepers were specialists will you please give us the estimate of your sales of supplies? We are going to make you some specialists if we can. When men come to see me I can give them milk and honey because I have a dairy. I have a hundred head of cattle, fifty acres of orchard and four acres of land. I can give you milk and honey and peaches and apples; and people come and ask my advice on bees and I give them that. I have made money in keeping bees. I have had 525 colonies. I live in Central Nebraska. Yesterday morning as quick as I approached the Denver Special for St. Louis I got in company with a very fine man. We were going back and forth to the drinking room to get water and so forth. This gentleman was somewhat of a Jew and he got all there was in life and he found out that I was bee-keeping, and he says to me, "In this bee-keeping, they kind of take care of themselves." I

said, "Oh yes, they take care of themselves just like your business does; they don't need any attention any more than your business." He had \$5000 worth of orders in his grip. He said the footpads could take his clothes as long as they left his orders. People come to me and they will want honey, sometimes butter and bread, or milk and honey, and I would give it to them, and then by the way some of them would want canteloupes and I could give them those because I have raised them ever since we have had the round up on canteloupes in Omaha. This gentleman says to me, "How did you get so many bees?" I said, "I got them sitting down at the corners whittling those grocery boxes and telling yarns and the bigger the yarns the more bees I got." (Laughter.)

THE PRESIDENT: I ask your indulgence for a moment. In appointing a committee to wait upon the Pure Food Congress I omitted to put the mover of the motion on that committee. If there is no objection I will put him on that committee at this time.

MR. PRESSLER: I ask that Mr. Dadant be substituted for me as after we adjourn I wish to meet another committee.

THE PRESIDENT: Then we will put Mr. Dadant in your place.

MR. REINECKE: I would like to know where you get your specialists if we cannot keep these going; it would be like taking a queen away from a colony, your specialists will all die out in a short time. The few colonies I have make me more than one hundred per cent. on my investment. I don't think there is anything else would do it in life. I can take care of an apiary at home and take care of my other work. If I find I have success then I can go on further. It takes only a few colonies to start with.

MR. KREBS: It does seem to me that this question has had sufficient argument, yet I would like to suggest that

it seems people do not seem to understand the idea Mr. Hutchinson wished to bring out. While he speaks of specialists, as I understand it, he simply means those that intend to make a living of it should make a specialty of that business by understanding all the rudiments. I don't think Mr. Hutchinson would even hint at such a thing as nobody beginning while he is yet in another business.

MR. ABBOTT: Is there any man in the house that has not had any source of income from any other direction except from his bees this year?

(Six members stood up.)

DR. MILLER: I don't consider that a fair question, really. If I should find a quarter on the street it would rule me out.

MR. ABBOTT: But you didn't find any quarter.

DR. DRUNERT (Mo.): I would like to ask brother Abbott a question, I have a farm and an apiary and I run the two together. The farm lost me money but I made \$500 out of the bees.

MR. ABBOTT: That shows you are a good bee-keeper but a poor farmer.

DR. DRUNERT: I have farmed successfully and paid off the mortgage on my farm and I have made a success of bee-keeping.

MR. DIEBOLD (Ill.): In regard to Mr. Hutchinson, our worthy intending Secretary—I hope he will be elected—I understand from his paper that if a man will give his money and his intelligence to bee-keeping there is more profit from it on account of the fact that you can buy manufactured goods in larger quantities, and get down to the wholesale price.

MR. ANDREWS (Cal.): I suggest we leave this question like J. P. Israel left the question of hives. He claims the world's record for making hives. After they had discussed the hive question through all the bee journals he said it seemed to lie with the bee-

keeper and he could judge for his locality the best hive to use in that place; and that is the only way to leave the question of the number of colonies of bees to keep.

SELLING GRANULATED HONEY.

Question: Is granulated honey in the Aikin's package a benefit to our markets?

MR. FRANCE (Wis.): At the request of one of our members I wrote that question. It possibly does not cover the ground intended. The idea is whether the effect of granulated honey upon the market is injurious or should we educate the people on that point? This gentleman referred to this Aikin package from the fact that it was put up in that form.

MR. ABBOTT: I want to call the convention's attention to a condition of things that exists that might be of some advantage to them in that line. I have been receiving circulars from people in St. Louis, I don't know who they are, advertising what they call a paper pail which they say will hold oil. If it will, it will hold honey. I wonder if these people who wanted a sack could not get that pail. You could make them of paper with thin tops and bottoms if you want to.

DR. MILLER: I would say any kind of a package, in the matter of honey, which did no harm to any other kind, might be a benefit. If Mr. Aikin's package can make customers that would otherwise not be made then it is a good thing. That does not say that I or anybody else must adopt that. Just answering that question I do believe Mr. Aikin has done good by introducing that thing amongst the bee-keeping fraternity.

MR. BROWN (Cal.): I would like to say we had a little experience in California in trying a package similar to that. We used the common oyster pail made of one piece of heavy manila paper. We had some put up several tons

of honey, that way and in the winter and spring season up until the hot weather in our climate they have stood firm, but I was told a few days ago, when leaving there, in some cases when it got real hot the package had absorbed a little bit of moisture and, therefore, to some extent, spoiled the looks of the package. But they had no parafine on them, simply manila paper as you see it in your stores today.

MR. WEBER (Ohio): I believe it would be a good thing to educate the people to the fact that granulated honey is pure. While you would bring it before the public and teach them it was pure it would result in consuming more honey, because when the people see granulated honey they think it is adulterated. I believe that is a good thing for the smaller associations particularly to take up and teach the people it is pure honey.

MR. MUTH: I understand now that granulation of honey is not a proof of its purity; it can be mixed with almost 50 or 60 per cent. and then granulate.

MR. LOVESY (Utah) Mr. President, in our country we have been trying for years to educate the people to eat granulated honey. Last year a gentleman in one of our towns brought over a wagon load in these paper boxes to Salt Lake City, and around the County, and he had to open those boxes and let each person eat a piece of it before they would believe it was honey. It was almost as white as snow. If we try to put our honey on the market that way they insist that it is sugar and in fact I cannot even sell it in the glass in Salt Lake City. I have to put a little portion of what we call amber honey in it to give it a kind of golden tint, and then they believe it is honey. It is well known that Alfalfa honey will granulate quicker than any other. We have to liquify our honey in the winter time for from three to four days and ship it in a liquefied condition, and in that

way it will go sometimes for months in the coldest kind of weather without granulating again. Sometimes it will granulate the second time and sometimes we can keep it for two or three years and it will not granulate.

MR. GILL, (Col.): I think our friend is mistaken when he says alfalfa is more prone to granulate, because there are several kinds that will granulate before alfalfa. We reckon alfalfa will stand up longer than basswood. We have one kind of honey in Colorado where the bee has to hurry home to get there before it granulates.

MR. DADANT: I think this question of the granulation of honey is very important. I think we were among the first to extract any in large quantities. We have been raising extracted honey for years and we have sold hundreds of thousands of pounds of it. We have educated a great many of our patrons to the use of extracted honey, and we sell nearly all our honey granulated. You run the risk of burning your honey if you melt it. After all, the natural condition of extracted honey is granulated in the winter. I believe Mr. Weber's argument is good. It is said they can manufacture honey that is granulated. When you find adulterated honey on the markets it is liquid and your honey always granulates, therefore it is well to educate people to use honey that is granulated. We should insist on the fact that good honey in cold weather will granulate except in a very few instances.

MR. RHEES, (Utah): This question interests me. I have not in the past done very much in raising honey but I propose doing more in the future. I have sometimes thought if we could invade the candy market it would be a very fine thing. Children are very fond of honey but in this day of enlightenment we are accustomed to having things prepared in a convenient form. On account of that we much

dislike anything that causes any particular effort after we buy it to prepare it for use.

Some people do not like honey in a candied form and I believe the majority of people would rather eat it on their hot rolls and batter cakes in liquid form. But before they can get it in that form they have to liquefy it. This is something that most housewives would not do. I believe if candied honey could be put up in a small enough package, in little tubes say, or some smaller form, that it could be sold and used as candy by the children and it would be very convenient.

MR. DAVIS, (Tenn.): I would like to ask the gentleman from Utah a question in regard to liquefying his honey. I understood him to say he liquefied for several days. Does he mean he keeps it warm for several days?

MR. LOVESY, (Utah): About 120 degrees, yet, not too hot. If you get it too hot you usually color it. I liquify it from three to four days and keep it maybe a little less than 100. I find even at that if I put it on the stove and keep it there for two or three weeks it will color it. If you put too much heat on it you can spoil both the flavor and color in a few hours. I liquified the whole of the honey that I sent down here to the Fair on a furnace and I left it there for four days and still you will find some of it candied.

MR. HART, (Cal.): I would like to know if Mr. Lovesy keeps a fire under his honey for four days?

MR. LOVESY: In liquefying this honey to send down here to the Fair we put it on for a couple of days. In fact I had found out many years ago that by liquifying and keeping in a liquified condition for three or four days it would keep; and as I said before, if it granulated the second time we would go through the same process, and I have had honey keep for two or three years after that the same as in

the liquefied condition. If we had liquefied it for only 24 hours or so and then took it off the first cold snap that came it would granulate again.

MR. DADANT: Do you melt it over water or on the stove?

MR. LOVESY, Generally on a coal oil stove. If you use that it is a good idea to get an iron ring and set the can on that. I use a coal oil stove with three burners.

MR. DADANT: I don't know whether this is exactly on the question, but Mr. Lovesy gives us an impression that honey heated to more than 120 degrees will color. I believe his method of heating has something to do with that. From what he tells us he does not put it over water but on a coal oil lamp and heats it to 120 degrees. If he would examine it he would see the honey that is right next to the fire becomes a great deal hotter than that, and the honey next to the metal gets burned and turns dark while the rest of the mass is still cold. The only way in which you can melt honey and keep it from being damaged by heat is over water, one vessel in another. You must not let the water boil as it will evaporate the essential oils of the honey. I think the damaging of the color comes from what I stated.

MR. ABBOTT: I like to agree with Brother Dadant whenever I can but I have to disagree with him this time. You don't have to have water in order to heat honey properly. You can heat honey with a dry heat just as well as you can with water; in fact it is better. I have been dealing in extracted honey for twenty years and I have bottles that have been heated up a half dozen times; some of them are just as white as the day they were first put in the bottle and the flavor is not injured in the least. We used to use water; we don't do that any more because we don't want our labels destroyed. As soon as it granulates in the store the

wagon takes it up and it must be liquefied and go back in that condition and if we used water we would have new labels to put on every time. We do it with dry heat but the vessel which contains the honey must not come in direct contact with any fire.

MR. PRRESLER: The question was whether it is profitable to use the Aikin package to sell granulated or extracted honey.

MR. LOVESY: This question of granulated honey is a question that interests most of us. My experience is that what Mr. Dadant says does not pan out with me. I put sufficient heat on those cans of honey that they will take at least twenty-four hours before the honey melts and then I leave it there the full length of time. In the winter time I leave it there three or four days and when I pour the honey out it is as white in the bottom of the can as at the top and if Mr. Dadant's theory was right it would be colored at the bottom. The idea of liquefying it for that length of time is to keep it in liquefied form.

The hour of 5 o'clock having arrived on motion of Mr. Hyde, duly seconded, the Convention adjourned to Wednesday, at 10 o'clock a. m.

THIRD SESSION.

Wednesday, September 28th, 1904.

At 10 o'clock a. m. the President called the convention to order and at his request the Rev. Mr. Brant led the convention in prayer.

The President left the chair. Mr. Dadant in the chair.

PRESIDENT'S ADDRESS.

THE PRESIDENT: Mr. Chairman, ladies and gentlemen, and brother bee-keepers, it affords me much pleasure at this time to address you as your President. This is the fourth convention of bee-keepers of the world and the 35th annual convention of the National Bee-Keepers Association of

America. I feel proud to preside over the deliberations of such a body of ladies and gentlemen as are here present. It makes every bee-keeper at heart feel proud of the association that we have and by mingling together to know that by being in touch with one another we can in our own way use our best endeavors to push our interests to the front. Talking on international matters, you have here, within a few hundred feet, one of the greatest displays ever known in modern times, the World's Fair, something that no mind can fathom; something that those who have helped to construct it cannot tell you the great beauties of. It is something that is a great educator in modern times to the average mind. You go there and look through the foreign industries and the different buildings and you find the crude appliances of long ago and the magnificent appliances we have at the present time. Such is the case in beedom. You can look back years ago when our appliances were crude. We have got down to-day to modern bee-keeping where you are making it a science, where you are doing all you possibly can to build up your industries. You should feel proud of it. You should feel proud that you are meeting here today in the World's Fair City. Nothing grander in the history of this country has ever been presented to the human mind. Some of you have visited, and others will visit, this Fair before you leave the city. I want to say to you as your presiding officer, that I know no north, no south, no east, no west, and I hope that each and every one of you will have this same feeling in your own hearts, to meet here as a band of brothers to push forward with your shoulder to the wheel of this organization, that not only now is a grand organization but in the future will be one of the grandest in the United States. We have this representation of foreign countries. We are

glad to know they are here; we are also glad to know that they take the deep interest that they do in coming here to mingle with us.

The matter of legislation is one of vast importance to us all and I hope before this convention adjourns sine die that there will be a resolution passed here that a committee be appointed of one or two good bee people from each State that may go to your representatives and your senators and try through the committees we have appointed to get National legislation to put us in closer touch than we have been with the several States and government of the United States. When you look over this vast country and know that we have lots to learn, lots of land undeveloped, you can see what we can do for the bee-keeping world. Take California, Utah, Texas, Idaho and Colorado; there are thousands of acres of land there to-day under the irrigating system that will support tens of thousands of families. We can be bee-keepers there and raise the finest honey known on the face of the earth. Those of you who are in the industry do not think you can ever produce too much honey because the population is increasing and they need more of the sweetness through life. I want to say to you with irrigation that there will be tens of thousands of acres of land thrown open to the public within a few years, and as Horace Greely said in his younger days, "Young man go west," I advise many of you who have not got suitable locations to go west to the different sections. To give you an idea and to get in your mind's eye that which all should know, take my own section, twenty years ago the Indians were taken from the Reservation on the west of Colorado and to-day we are shipping from that county 1400 car loads of fruit. We have shipped from that county ten car loads of beautiful honey. Go on to California, look at

the resources there; go into Texas they have lots of undeveloped country, and if you are not satisfied with your lot, migrate west, and I know there will be something good there for you.

Now, we are here for one purpose, for the betterment of the bee-keeping fraternity of the United States. We want to mingle together; we want the best thought brought forward here, not in a selfish way, but so that it will benefit everyone who is in that organization. We want you also to interest your neighbors; get them to join this Association; and when you take into consideration that this industry produces \$25,000,000 worth of honey a year, and that last year the honey product of the nation would have filled a train of cars twenty-five miles long, you then can know what a great industry it is. Some think it is an insignificant matter. The press has not even taken notice of us as they have of some minor matters that have come here in the way of Congresses. But when we put before them the great industry we are trying to follow they then will give us more credit than at present.

If any of you in your hearts have any selfish feeling, if there is any clique in this convention to try to control anything, pass it to one side. You come here as a lot of brothers and sisters. If I am not a proper officer turn me down, and put someone else in, or if the officers here are not the kind that you want to represent you, do your duty. Do not allow any clique of men here who in any way will try to run you. Think for yourselves. It is an age when all men should think. It is an age in which we are getting more gray matter in the tops of men's heads than in the past; it is an age that is the greatest in the history of world, and as bee people I hope this will be one of the greatest conventions that has ever been held in the history of the United States or the world, and that it may go out when we adjourn

that we have had one of the best conventions ever held. I thank you, ladies and gentlemen. (Applause.)

Misleading Newspaper Reports About Artificial Comb Honey.

MR. ABBOTT presented the report of the special committee on comb honey manufactured by machinery.

We, your committee, to whom was referred the resolution on adulterated comb honey, beg leave to report as follows:

In view of the oft-repeated statement in the public press that comb honey is made, filled and capped over by machinery.

Resolved, That the National Bee-Keepers' Association will forfeit the sum of \$1,000 to any party or parties who will furnish proof beyond successful contradiction that said statement is true, and produce as part of such evidence two pounds or more of such comb honey that has been manufactured without the use of bees in any way, with sufficient skill to deceive ordinary honey experts.

E. T. ABBOTT,
ELLIS E. PRESSLER,
E. KRETCHMER,
M. A. GILL.

Mr. Hershiser moved, seconded by Mr. Krebs that the report be adopted.

The President put the motion which on a vote having been taken was declared carried, unanimously, the members rising to their feet.

MR. PRESSLER on behalf of the press committee read an article from the St. Louis Republican which had appeared in the morning issue showing an entirely wrong construction had been placed upon the report furnished by the Press Committee. It would appear from the report as published that half the members present at the convention believed that comb honey could be manufactured.

MR. ABBOTT stated that the report had been written out correctly by the committee, and had been given over the

telephone, but that the Press people did not seem to be able to understand plain English. He stated the Committee would go in person to the newspaper offices and he thought they could be made to understand.

MR. HERSHISER as chairman of the rules and order committee suggested some changes in the hours of meeting, owing to the excessive heat, and after considerable discussion the rules were amended as follows, the matter on motion of Mr. Dadant, duly seconded, having been referred to the committee to report again at a later time: "The committee on rules and order beg to report as follows: That the rules in reference to the program be changed as follows: That this present session end at noon or as soon thereafter as the various cities or localities are heard from who wish to have the convention held at their places next year; that we then have an intermission until 7: o'clock and an evening session from that time until such time as we see fit to adjourn; that the convention thereafter assemble at 9 a. m. instead of 10 o'clock and adjourn at noon for an intermission until 7 o'clock, and so on thereafter until the convention is closed.

MR. HERSHISER moved, seconded by Mr. Smith, (Ill.) that the report of the committee be adopted. After some discussion the President put the motion which on a vote having been taken, was declared carried.

Mammoth Committee on the Adulteration of Honey.

DR. BOHRER: Mr. President, ladies and gentlemen of the convention, I have a motion that on first sight might seem to conflict with some of the resolutions that have been adopted, but I hardly think so. I have a resolution that calls not only for a National legislative committee in this body but from all the States. It will be a massive committee but they will each

have their respective work. I will read the preamble of the resolution which is as follows:

Whereas, The adulteration of honey by combining it with glucose, and selling the same under the label of honey has become so common throughout the country, that a large per cent. of the people, who would purchase and use honey but for the uncertainty of being able to purchase unadulterated nectar And, Whereas, such adulteration of honey renders it unwholesome as food, while pure and unadulterated nectar is undoubtedly the most wholesome liquid sweet known among the most civilized people of the whole world, And, Whereas, the sale of adulterated honey under the label of pure honey, bears upon its receptacle a falsehood, and is a stain seriously detrimental to the pursuit of apiculture, And, Whereas, the absence of full intelligence, in apicultural science, in connection with gross and inexcusable neglect, among bee owners, is causing foul brood to be harbored by bee-keepers in almost if not all of the States and in Canada, to an extent that cannot be otherwise than the cause of serious loss among bee-keepers who depend upon the pursuit of apiculture for an income and support to themselves and those depending upon them.

Therefore, Resolved, That we the bee-keepers of North America, in National Convention assembled, Hereby instruct the President of the National Association of bee-keepers, with the assistance of the members from the respective States, to appoint two persons from each state and the Dominion of Canada, who shall organize themselves into a legislative committee, and as members of such committee, it shall be their duty to confer with the bee-keepers of their respective States, and urge them to see the members of the House and Senate in each State, and ask them to enact a law in each State (where such law does not already exist,) imposing a penalty upon any and all persons found adulterating

honey with glucose or other liquid sweets, and labeling and selling or exposing the same to sale, and also against keeping bees affected with foul brood, knowingly, and that will authorize and require such diseased bees, to be either cured of the disease or require them to be completely destroyed together with everything about the apiary where they are kept, that is not thoroughly and effectively disinfected.

DR. BOHRER: I move the adoption of the resolution. I did not formulate this resolution to provoke a lengthy discussion and rather than have that I would withdraw it.

DR. MILLER: In order to have this matter properly disposed of there should be a committee to whom it be referred and I move the appointment of a committee of five on the resolution.

MR. DIEBOLD, (Ill.): I second the motion.

The President put the motion, which on a vote having been taken was declared carried.

The President appointed the following as a committee on resolutions: Messrs. Hutchinson, (Mich.), Poppleton, (Florida), Smith, (Ill.), Hagood, (Texas), and Cogshall, (N. Y.).

MR. FRANCE: It may possibly be in order at this time under the head of new business that the resolution as offered by Mr. Abbott should possibly come before this Committee for consideration. It is one of the best features we have had so far in the Convention, and if that, as one of the shots fired out of the gun of the National Bee-Keepers' Association, could be put in a little leaflet so that the members of the Association could have it, it would eradicate this cry about adulterated honey faster than anything else, and I would like that either I or some one connected with the Association should have the privilege of mailing that to the members.

MR. ABBOTT moved, seconded by Dr. Bohrer, that his resolution be attached to the circular which the Board had been requested to furnish for distribution.

The President put the motion, which on a vote having been taken, was declared carried.

MR. STILSON (Neb.): Mr. President, in the address which you gave this morning to this body I noticed that you spoke about the representatives from foreign nations. On the Exposition grounds we have nearly one hundred nations represented. Among them some of the Commissioners from the different Countries are very anxious indeed to get hold of our American ideas of doing business. Would it not be proper to extend an invitation to some of those foreign Commissioners to come here and meet with us? If so, I move you a committee of three be appointed to see some of them to invite them to come here and attend our Convention.

MR. KREBS: I second the motion.

MR. DADANT: I would move in amendment to the motion that that committee consist of one member, Mr. Stilson to be that member.

MR. STILSON: I will not accept the amendment.

The President appointed as the committee Messrs. Stilson (Neb.), Dadant (Ill.) and Tithoff (Russia).

Some complaints having been made by some of the delegates as to the treatment they had received from the managers of the Christian Endeavor Hotel, on motion of Mr. Abbott, duly seconded, the President appointed Mr. Abbott (Mo.), Mr. Muth (Ohio) and Mr. Davis (Tenn.) as a committee to enquire into and arrange if possible to have the difficulties adjusted.

PRESENTATION OF INVITATIONS WITH REFERENCE TO HOLDING THE NEXT ANNUAL CONVENTION.

MR. MUTH (Ohio). I am the representative of the Hamilton County Bee-

Keepers' Association and I extend an invitation to this convention to meet next year in Cincinnati. We have in Cincinnati quite an enthusiastic lot of bee-keepers who can well take care of this convention in the city of Cincinnati. I think that city can take care of the bee-keepers convention as well as any city in this country. We have bee-keepers who have formed Associations and they are very enthusiastic. We have in Hamilton county alone some five, six or seven hundred of them and they are very enthusiastic in their work and if you could come we could make it very interesting for you. (Applause.) In September next we have the fall festival. It is not quite as large as the World's Fair but it is interesting, anyway, and at that time we have special rates, and if this convention could come to Cincinnati no doubt we could secure good rates from all over the country.

MR. COVEYOU (Mich.): I think Mr. Muth has given a very good invitation. The city is very well situated to take care of us and is very centrally located being reached by nearly all the railroads and boats. I do not think there is a better place in the whole of the United States. I would like to see the convention meet in Cincinnati.

MR. E. R. ROOT (Ohio): As a representative from Ohio I did not expect to speak on this question, yet, I ought to be loyal to my own State. I wish to say I have been down in Cincinnati and attended two or three local conventions and they can get quite a large company of enthusiastic bee-keepers together, and I am sure the convention would receive a very royal reception. It is a railroad center that communicates directly with all parts of the south and north, and I am sure it would be a very good selection if we could meet there. I should be very glad to see you come into our state.

DR. BOHRER (Kansas): I was born and raised within about fifty miles of

Cincinnati up in Brown county and if we can get reduced rates it will give me an opportunity of going back home. I was there once at a bee-keepers' convention and we had a jolly good time.

MR. MUTH: I failed to explain to you the enthusiasm of the Cincinnati bee-keepers. The Hamilton County Bee-Keepers' Association has passed the foul brood law of Ohio. I just merely mention this to show you that we can undertake something and carry it out, and if you come to Cincinnati there will not be a thing lacking; there will not be any disappointments and misunderstandings at hotels or anything because the Hamilton County Bee-Keepers' Association knows how to do those kind of things in the right kind of way.

THE PRESIDENT: How about your railroad rates? That is a thing that is very vital to bee-keepers.

MR. MUTH: There is in Cincinnati a bureau which attends to the inviting of conventions. Had I had the time before I came here I would have investigated it fully. All we want to do is to tell them about the National Bee-Keepers' Convention and they will get the rates if there are any to be had; they will also secure the halls and all the accommodation. They do that work and it is for the benefit of Greater Cincinnati, to make Cincinnati a Convention City. I know we are going to have another fall festival and the travelling fraternity and the houses are getting railroad rates, and this year we are going to get better rates than last year.

MR. WEBER (Ohio): I represent the South Western Ohio and Hamilton County Association of that State and I wish to invite you to Cincinnati. We can assure you we will do everything in our power to make it nice for you. With regard to the bureau, we wrote a letter to the Secretary but we did not get a reply in time, but he promised

everything in their power. If he had gotten a reply in time the Mayor would have written to the Convention. I wish you would come and we would do all we could for you. Cincinnati is nicely situated, it has nice surroundings and you would be pleased. The railroad facilities cannot be beat; they are just as good as anywhere.

MR. HYDE (Texas): Mr. President, ladies and gentlemen, I am not a speaker and when I have anything to say I usually say it at random. I represent the great Lone Star State of Texas, and I represent the Texas Bee-Keepers' Association, I represent the great City of San Antonio, Texas, I represent the South West Texas Bee-Keepers' Association, and I was appointed to secure the next Convention if possible for San Antonio. I have official communications from the city of San Antonio which I will read.

San Antonio, Texas, Sept. 20, '04.
To the Bee-Keepers:

The time will soon be at hand for election of National officers and I believe that you will also be asked to name your preference for next meeting place for the National. It is understood that a majority vote of the members of our Association will most likely be followed by the executive committee selecting that place that receives the most votes in the general election.

For several years San Antonio, Texas, has been an applicant for the honor of entertaining the National Association. Texas has a large representation in the list of members and is one of the leading States in the value of her bee products.

We have waited long and patiently for the National to favor us with a convention, and we therefore earnestly urge you, and respectfully solicit your vote for San Antonio in the coming election.

On behalf of the City of San Antonio I submit the following invitation:

San Antonio, Texas, Sept. 2, 1904.

Mr. Geo. W. Brodbeck,

Sec. National Bee-Keepers' Assn.

St. Louis, Mo.

Dear Sir:

Our proposition to your distinguished body, with a view to influencing you to elect San Antonio as a point to hold your annual Convention, is not a new one. You will recollect that a similar invitation to this was extended to the meeting at Los Angeles, and presented by two of our leading citizens, hoping that their eloquence, dwelling on the beauty of our surroundings, and the general attractiveness of this part of the country, would influence a decision in favor of San Antonio for this year.

We are again an applicant for the distinguished honor of entertaining your Association in the year 1905, and as earnestly as on former occasion make the assurance that, should we be thus distinguished, it will be our pleasure to use every effort at our command to convince you that we are entitled to the reputation we enjoy for excessive hospitality.

Again urging a favorable consideration of this invitation, we are,

Yours respectfully,

H. E. HILDEBRAND,

Pres. Business Men's Club.

JOHN P. CAMPBELL,

Mayor.

T. C. FROST,

Chairman Convention Com.

On behalf of the bee-keepers of Texas, whom I represent, I earnestly ask for the next meeting for San Antonio and promise the bee-keepers that they will be royally entertained while in our city. Your trip here and stay with us we intend to make pleasant for you, and we assure you that you will be well repaid for visiting historic San Antonio.

On behalf of the railroads entering San Antonio I will say that they assure us that they will secure a rate of not more than one fare plus \$2.00 for the

round trip ticket from all points North and East and West. Very often during the fall months we have low Tourist or Home Seekers' Excursion rates, that are sometimes as low as \$15.00 for the round trip, and if the committee will select the proper time no doubt this latter rate can be taken advantage of. Depend upon San Antonio and the railroads to make the rates and the entertainment all right, so decide that you want the next meeting here and then vote for it, and we hope that when next year rolls round that we may count you among our visitors to the National.

Again soliciting your support, I am,
Yours for a San Antonio Convention,

HOMER H. HYDE,

Chairman committee appointed by
the Texas Bee-Keepers to secure
the next meeting of the National in
San Antonio, Texas.

Our State is noted for hospitality especially, and we welcome each and every visitor that comes amongst us. It will be our greatest pleasure to be thus honored by having the next meeting of the National Association in San Antonio. For several years I believe we have been applicants for the distinguished honor of entertaining you and we feel that while we have been rebuffed time and again we know the next meeting of the National Association will come to Texas. I believe there has not been a meeting there for a great many years and we want very much to have it for once in the South.

On behalf of the railroads I will state I am located in San Antonio and am well acquainted with all the railroad people, and Mr. Hutchinson the representative of the 'Frisco System, states there is no doubt but what a good convention rate can be secured. Every year for several years there has been in force a Home Seekers' excursion through the fall months on the second and third Tuesdays. This rate is \$15 for the round

trip this side of Pittsburg. He says there is not the slightest doubt but what this rate can be taken advantage of and before the executive committee decides they can know positively whether this rate will be in force and effect. I am sure it will be in effect and this is almost like giving you your transportation to Texas.

In regard to our climate it is superb; we don't have hot weather like they have in California. I have been suffering from the heat here in St. Louis, but down in Texas we have a very fine climate especially in the southern part. There is never a night in the summer time but what we have a cover and sometimes two. The days are pleasant. I can assure you you will not suffer from heat while in San Antonio. The accommodations are excellent. This is the very gateway to Mexico. People from all over the country come there to winter and summer, and there are large numbers of hotels. I am assured by a very respectable hotel there, they can give us rates of fifty cents per day on the European plan; and one of the best restaurants there say we can get our meals for twenty-five cents, and they are as good as any fifty or seventy cent meals in St. Louis.

Now, Texas has done more for the bee-keepers industry than any State in the Union. She has an experimental station and indeed and in truth we are carrying experiments on for the benefit of the bee-keeping industries. They have a regular course of training in the State college. Mr. Scholl goes out over the country and attends the meetings of institutes and educates the people in the uses of honey. We have a foul brood law in Texas and we are going to have a pure food law at the next meeting of the Legislature. We have two or three things specially for you when you come. We are not going to tell you what they are in advance because we may be slipped up on some of

them. A great many people say, I want to go to Texas. We have lots of bees down there and lots of other things; we raise nearly everything in Texas that can be found in the Union. There are large apiaries in Texas. We will be glad to have you come and stay with us as long as you can. We will take you around and show you the country and show you bee-keeping.

I have about taken up my time but with the consent of the convention I would like to answer any questions you may wish to ask me as to the advisability of having the next convention at San Antonio.

MR. KREBS (Texas): Mr. President, ladies and gentlemen, I am also from San Antonio and I wish to make a statement which Mr. Hyde seems to have left out. The gentleman from Cincinnati spoke about an exposition they would have in the fall of the year. We have an International exhibition every fall in San Antonio and that will give reduced rates. Therefore by arranging to hold this convention at about that time, somewhere in the latter part of October, we will have those cheap rates and you will also have the opportunity of seeing this International exposition.

MR. HYDE: I believe it is possible to have three hundred local representatives present in South West Texas. You will have the largest crowd of local bee-keepers ever gathered together.

PROF. BENTON: What time of the year would be the most convenient time?

MR. HYDE: While we would be glad to have you in August or September, this International fair is held in the latter part of October of each year and from the fact that we can get better local rates at that time, we can possibly have more local bee-keepers present, and we can also take advantage of the Home Seekers' excursion rates.

PROF. BENTON: Do you think October would be favorable?

MR. HYDE: Yes, it will.

PROF. BENTON: I come from the District of Columbia and if I were not committed to something else I should ask you to come to the city of Washington, but I am committed to San Antonio for the reason at the time the question of coming to St. Louis came up I was decidedly in favor of St. Louis because of the Exposition, but I distinctly stated after this great Exposition the Texas people had so often asked for the convention it was due to Texas that we go there. There have been several conventions held of the National Association in Cincinnati. We have gone out to California and Colorado; and Texas on each and every occasion has stood back. Now is the time for Texas. (Applause.) It is a great State, it is looming up in apiculture. There are great possibilities there that we in the North know little of. We should learn about it. Let us go there and be entertained by those hospitable Texan bee-keepers and we will come back north and have a greater idea of them.

MR. ABBOTT: I was born in Ohio. I went to Texas once and when I was down there I read what Sherman said. He said if he owned that hot place and Texas he would sell Texas and move to the hot place. I felt that way about Texas when I visited it some years ago but I have changed my notions since that. I want to go to Texas now and for this reason, I believe that Texas is entitled to us as Prof. Benton said. I remember four or five years they have been asking for us and just like Prof. Benton I said to the people, "Come to St. Louis to the great Exposition and we will go to Texas." As a newspaper man I have a great deal to do with railroads. The Trunk lines that run into Texas are the most liberal railroads on the continent and they will do more for the bee-keepers than any other class of railroads in existence. I know this from actual experience. (Applause.)

MR. GILL (Col.): That great triangle of cities, Chicago, Cincinnati and St.

Louis is always willing and able to care for our conventions, and it certainly has had its share for awhile. We all have been there and would like to go again and intend to in the future but it seems to me at this time we should go to see St. Elmo and San Antonio

MR. FRANCE: As Manager of the Association there was an application sent to me to extend an invitation to hold the next annual convention in the extreme northwest corner as there would be an exposition in Oregon, and there would be excursion rates all over the country. As I understand it is not the pleasure of the Association assembled to finally decide upon these matters. We do not know what may come up in the course of the year and it was suggested last year that at the time of the election the members at large express their views and from that the Directors could better decide. I believe the proper way is to leave this matter to be decided by them. Anything we do to-day we do at a loss. I am heartily in favor of the sentiments of the members present but remember this is the minority of all our membership and we want to accommodate a great many who are not here to-day. They ought to have something to say with reference to this matter. They will read these invitations in the annual report in a very short time and they can then express themselves and the Board can act accordingly.

THE PRESIDENT: Pardon me in discussing the matter from the chair. I will say last year the Executive committee of your Association asked that the individual members scattered throughout the United States give their preference for a convention city. The vote was sent in to the Manager and eighty per cent. at that time were in favor of St. Louis, where we are now meeting; and I think in the future, whoever your officers may be, it would be a good idea to let the members vote and send in their votes to the manager and that guides the Executive committee in de-

ciding where the next convention is to be held. We often get enthusiastic in convention and get carried off our feet with one man who is more smooth in presenting his claim than another, but to do justice to all parts of the United States I think that is the proper way to do it.

I have now the distinguished honor of presenting to you the representative from Russia, Mr. Tithoff. (Applause.)

MR. ROOT: I might say Mr. Tithoff came to our place of business about a year and a half ago not knowing a word of English; he came with the full credentials of the Russian Government to learn American methods in bee-keeping that he might carry them back to his own country. We tried to converse back and forth but did not succeed very well. I showed him various devices and he seemed to be perfectly familiar with them. I motioned to him and he intimated he understood what I was trying to convey. He understands English now and understands it well, but is not able to speak it fluently. At the same time he is a bee-keeper and I am glad to bring before you a foreign expert bee-keeper. He understands the methods of producing honey. He has been out in one of the large bee yards extracting honey and I think perhaps during the coming fall or next year he is going south and possibly to San Antonio to learn something about their methods. I told him one of the good places in the United States to learn American bee-keeping was down around San Antonio where there are a lot of bee-keepers.

MR. TITHOFF: I am sorry I cannot speak English good enough. I want to say I came here a year ago from Russia to learn American methods of bee-keeping and I would like to tell the American bee-keepers that we use American ideas in Russia and we find it very good for our business. I find that many of the American bee-keepers and American citizens know very little about Russia; they think it is a very cold country;

they think we could not keep bees at all.

I have written a paper on bee-keeping in Russia and I am sorry that I could not read it myself and I will ask Mr. Abbott to read it for me.

Mr. Abbott at Mr. Titoff's request read the paper written by that gentleman entitled,

"BEE-KEEPING IN RUSSIA."

A year and a half ago, when I came to the United States of America with the object of acquainting myself with the latest methods of American apiculture, I found during my stay among the apiculturists of this country that many of them, in common with the rest of the Americans, had absolutely no knowledge of the existence of the bee-keeping industry in Russia. Many expressed their surprise in conversation on the subject that bee-keeping should be at all practicable in that country. I had to conclude that in the belief of the general run of people Russia was a country where bears are wont to stroll around the streets of cities in the broad daylight, where the only means of transportation is furnished by arctic dogs, and fur coats are worn in the middle of summer. Siberia, with the convicts—they thought—was a land of the eternal snow and cold and darkness and was withal a land replete with horrors. Such ideas could only be explained by the great distance between the two countries and by the difference in language and literature.

It is my desire to throw a little light upon the question whether apiculture really does exist in Russia or not and in what state it is. I take advantage of my presence at the Convention of the North American Bee-Keepers' Association in order to accord in my present paper a glimpse into the state of apiculture in Russia, and appeal to the esteemed members of the convention for a few minutes of their attention.

In the most ancient chronicles of Russian history there are many mentions not

only of the existence of apiculture in Russia, but also of the fact that it was one of her chief pursuits. Thanks to the primeval forest which covered with hardly an interruption the entire country, thanks to the wealth and variety of her natural resources—still virginal in most places—commencing with the fiftieth degree of Northern latitude and southward, the bee-keeping industry thrrove everywhere. It flourished particularly in the South, Southwest and Southeast of Russia.

The consumption of honey, both in its natural state and as a beverage (Meth or Mead,—Remark of the translator) in ancient times was immense, according to historical records. All classes of people were fond of honey, and thought it healthful. Honey was considered an aid to the preservation and the strengthening of health, it was thought to lend physical and spiritual vigor to the entire organism.

After conversion to Christianity apiculture rose even higher in esteem. Wax was used in tremendous quantities in the sanctuaries of the Greek Church in the celebration of her holy rites. According to the laws of the Church, milk and meat are forbidden to be eaten during the fasts, and honey is used in great quantities as a valuable ingredient together with vegetable meals, and is therefore in great demand. It is thus seen that both wax and honey are indispensable articles for the religious requirements of the land. The progress of the development of bee culture in Russia further increased the demand for the products of the bee-keeping industry.

The records of history show that for several centuries previous to the XVII century, and including the latter, apiculture was carried on in the most primitive manner; it was, as it were, "a product of the chase." An immense number of swarms inhabited the trunks of the forest trees, and honey abounded therein. The labor of man was limited to the locating and gathering of honey.

About 1613 there appeared in Russia the first printed pamphlet on bee-keeping, the author of which was the Woje-woda (Duke—Translator's remark) Joannes Ostrogor. It was published in the Polish tongue and described a hive invented by the author and the manner of tending the bees therein.

We thus see that in the end of the 16th and in the beginning of the 17th century the Russian people had ceased to limit themselves to obtaining honey by bee hunting but commenced to give some thought to the question of "tending the bees." As a result, and owing also to the opulence of nature, apiculture became one of the great pursuits of the Russian nation. The extent to which the development of apiculture progressed can be seen from the fact that in many regions of the country even the ordinary duties and taxes were paid to the government in wax and honey. In spite of the immense home consumption wax and honey soon became materials of manufacture, and for the two centuries mentioned products of apiculture formed the chief articles of export from Russia. Wax was particularly exported to England, and the amount of wax exported to that country reached 920 tons annually.

Towards the close of the 17th century we already notice a considerable decay in the bee-keeping industry, the chief reason of which was the deforestation and increasing tilling of the land. In 1692 wax was already imported into Russia from abroad.

Since apiculture had at that time an important place in the national economy, the decay of this important industry called for protective measures on the part of the Government, in order to preserve and strengthen it. The government commenced to parcel out free lands for apiaries. In 1775 the tax—hereto levied on bee-keeping was removed. For the pursuit and the improvement of bee-keeping were granted prizes and rewards. A special medal

with the representation of a bee hive was instituted for that purpose. Several books on the subject of apiculture had appeared and various newspaper articles dealing with same are noticed. In 1807 was published as a translation from German the book "Experiments in Apiculture." The Emperor Alexander I, rewarded the translator with a diamond signet-ring and command to express to him his imperial good wishes.

In the beginning of the 19th century it became a recognized fact that in order to raise the productiveness of apiculture it was necessary to improve the technical basis and leave the old ways of caring for bees for the better systems; and both the Government authorities and private persons labored with that end in view. One of the foremost and most active workers among private persons was Peter I. Prokopovitch. Convinced the word of mouth and practical demonstrations were better than books in the task of placing apiculture upon a regular and rational foundation, Mr. Prokopovitch established 1828 a special school of apiculture and during the 22 years of his direction of that institution he graduated 566 students well intimate with rational apiculture. This school was in existence until 1879 and was of immense value to Russian apiculture. Mr. Prokopovitch is the founder of rational apiculture in Russia. The labors of Mr. Prokopovitch coincided with the discovery of the German pastor Rev. Dizerzon (?), who gave a new impetus to the development of apiculture throughout the world. Mr. Prokopovitch greatly assisted the propagation of new currents in Russian apiculture. The school of Mr. Prokopovitch was materially assisted by the Government. The disciples of Mr. Pokopovitch scattered throughout Russia; establishing many model apiaries and teaching others.

Due to the activity of the Government

and of private persons, interest in apiculture it materially increased; many new inventions of hives and apiarists' supplies came up, though in spite of everything changed natural conditions so undermined this industry that the decay of apiculture may be clearly shown from figures I shall quote below.

Yet in the beginning of the last century these were the figures of the export of beeswax from Russia:

Exported from 1801 to 1810 1250 tons,
Exported from 1811 to 1830 5306 tons,
Exported from 1821 to 1830 9129 tons,
of beeswax were exported from Russia to the value of \$10,173,000 for the first half of the last century. The exports of beeswax from Russia for the last fifty years of the same century amounted to —————, the value being \$586,632. In other words the total exports for the first half of that century amount to 94 per cent. of the whole, while the figures for the second half amount only to 6 per cent. In proportion as the exports decreased the imports of beeswax, as well as of mineral and vegetable wax, increased.

From the above it will be seen that not only the introduction of various technical improvements has failed not only to keep up the export of bees' products at its former height, but even to satisfy the growing demands at home for the products of apiculture.

Due to this sad state of affairs among apiaries, which has continued since the seventies of the last century, the Government now seriously approaches the problem of investigating the causes of the decay of this industry. The principal causes of this are as follows: A—The destruction of forests which is going on everywhere and the shrinkage of territory available for the gathering of honey. B—The great spread of the dread disease of foul brood. C—The increasing adulteration of wax and honey. D—Lack of sufficient knowledge among

the apiculturists as to the rational care of the bees. On the basis of the data gathered in the course of the inquiry a number of measures have been suggested for the raising and the propagation of apiculture, which measures are being effected. At this period in the history of Russian apiculture there becomes prominent the active and energetic personality of the Professor of Academy Alexander M. Butleroff. He comes forward first with a report on "Measures for the explanation of rational apiculture in Russia" 1871 and since that time until his death he took the liveliest interest in everything connected with bee-keeping. He was the head, the leader of everything and of everybody. He wrote several handbooks on apiculture, which were published in thousands of copies and which formed the textbooks for the majority of Russian apiarists. In 1886 under his management there came into existence the first Journal on apiculture in Russia,—*Russki Ptcheloyopniy Listok*—The Russian Journal of Apiculture, but also foreign news.

Mr. Butleroff established a model apiary at the All-Russian Exposition at Moscow in 1882, and for twenty days gave lectures on apiculture accompanied by demonstrations of various apicultural devices. At that time he gathered around himself a large number of followers intent on applying the newest methods to bee-keeping.

In 1887 a floating Apicultural Exhibition was arranged on a barge which sailed on the River Moscow for 30 days, making ten stops, the object being to acquaint the people with scientific apiculture. This Exposition was visited by 60,000 people in all, who were all anxious to be instructed in correct bee-keeping. A second similar exposition was arranged in 1889 on the river Oka, making 27 stops and being more successful even than the first. A special exhibition for Apiculture was held in Moscow in 1890. Several

model apiaries were shown; a course of apiculture was introduced in several schools. In 1884 there was opened a school at Twer with the sole purpose of giving instruction in apiculture, containing shops for making bee hives and bee-keepers' supplies. All those enterprises owe their origin to the initiative of Mr. Butleroff. In 1896 there was established at St. Petersburg the first "Society of Russian Apiculturists," the aim of which is the scientific and practical working out of the problems of apiculture, and co-operation tending towards the development of the latter. The society started a monthly magazine. Several branches of the society were opened in various parts of Russia. The society arranged exhibitions, conventions of apiarists, apiaries for instruction, courses in apiculture for teachers of the people's schools, etc. This fruitful activity of the society found imitators, new societies were established, of which there are now 38 with 8 divisions, and several more are to come into existence. Apiculture, including both theory and practice, is now taught in 80 apicultural schools in Russia, in many teachers' seminaries and other educational institutions. Apiaries were to be found in 532 people's schools in 1896, the teachers attending to the culture. Almost every society has its apiaries, warehouses and shops for apicultural supplies. Every year during the summer, courses in apiculture are arranged for the teachers and the people in general, each having hundreds of hearers annually. The South-Russian society has an experimental station with 30 divisions, in which there are made observations tending in one direction. There are several apicultural museums in Russia. In many Governments (provinces) also the Zemstvos (XXX) have been active and en-

(XXX) Zemstvos are administrative bodies consisting of elected representatives of the several classes of population in various provinces.

ergetic in the matter of elevating apiculture, inviting special experts for the purpose of giving instruction, visiting apiaries, giving advice and practical hints. At the present time there are 9 apicultural journals in Russia, — eight in the Russian tongue and one in Lettish. Four are edited by societies and 5 by private individuals. Besides, a large number of articles on the bee-keeping craft are published in the various agricultural publications. Apicultural literature grows from year to year. There are several dozens of publications of local authors and many translations from foreign languages, including such valuable works as Langstroth-Dadant, Dzierzon, Berleseh, Bertrand, Cowan, Cook, Mae-terlinck, DeLayence, Dubini, etc.

In its task of self-improvement and re-organization Russian apiculture borrowed largely from other countries of Europe, particularly from Germany, which land had workers of its own and stood in the front rank with regard to apiculture. There is besides greater similarity in climate between Russia and Germany, and the means of communication are more convenient. As far as apiculture in the United States is concerned Russian bee-keepers knew very little of that until 1892, and they took little interest in it. That country seemed so distant. Their ideas concerning the difference in climate conditions and concerning other peculiarities of America are exaggerated. In 1892 there came out in Russia a new journal called "Messenger of Foreign Apiculture Literature." It was edited by Ghenna'-di P. Kondratyeff, a most intelligent gentleman and a competent bee-keeper. Mr. Kondratyeff, travelled abroad every summer, going to Germany, France, Austria, Italy, Switzerland and other countries, showing the keenest interest in all things appertaining to apiculture; he visited the best apiaries, made the acquaintance of foremost apiarists and their

apicultural establishments. He found many things adaptable to Russian conditions and assumed the task of acquainting Russian apiarists with foreign apicultural methods. This was the idea of publishing that journal which has now become a lively echo of all that which may be usefully adapted from foreign methods to Russian apiculture. Mr. Kondratyeff was well acquainted with the celebrated Swiss apiarist M. Edward Bertrand, who frequently described American apicultural methods in his journal "*Revue Internationale d'Apiculture*." It was the esteemed Mr. Charles Dadant who awakened special interest among Europeans in American apiculture. The bee hive with the large frame which he recommended gave excellent results in Europe, and the foremost apiarists in their turn commenced to recommend it with great insistence. Mr. Kondratyeff, as the result of his tests, also warmly championed this hive and began to explain Amerian bee-keeping methods in this journal. Many original articles of American apiculturists have been published in translated form in this journal during the 12 years of its existence. Apicultural news from America were also frequently published. The names of the famous leaders in America,—Langstroth, Dadant, Root, Miller, Benton, Good, Doolittle, Pratt, Alley, never left the pages of the journal. All that could be applied to Russian conditions from Root's "*A B C of Bee Culture*" was quoted in the columns of that paper. The book of Benton was also reprinted, while Mr. Kondratyeff, together with his co-worker and the present editor of the Journal Mr. V. M. Isergin, translated in full and published in separate volumes of the works of Lanstroth, Dadant and Cook.

The result of this warm championship of Americanism has been the fact that to-day half of all the bee-hives with frames are of the American

system of Dadant. How popular this system is can be seen from the fact that the name "Dadant" is now synonymous with the frame hive. If you want to find out in Russia whether it is a hive that can be taken apart or not, you say: "Do you keep your bees in Dadant's or in ordinary hives?" Many other apicultural supplies have been found as usual and convenient in Russia as they are in America, and you will find now in a good many Russian apiaries things in common with the well ordered apiaries of America.

Having given you a brief history of apiculture in Russia, I will finally give some figures illustrating its present state. About 328,417 persons are engaged in apiculture in European Russia—which in proportion to the entire population is 0.34 per cent. Statistics gathered in one province to show the division of sexes in the bee-keeping industry demonstrated that 35 per cent. of the persons looking after bees are female.

The following is a table showing the number of hives containing bees in Russia:

European Russia	3,628,177	71.5 p. c.
Poland	116,414	2 p. c.,
Caucasus	832,683	16.5 p. c.
Siberia	494,506	9.5 p. c.
Central Asia	34,942	0.5 p. c.,
 Total	 5,106,722	 100 p. c.

Assuming the value of a bee colony to be \$1.50, the value of an old style hive at 50c and of a frame hive at \$4, this gives the capital invested in the apiaries as \$12,484,500. Average gross revenue from each hive in honey may be fixed at 83½ cents and in wax at 51½ cents, altogether \$1.55, which is 55 per cent. on the capital invested.

As far as the number of hives is concerned, apiaries are insignificant. On an average there are 10 hives to an apiary in Russia. The owners are also the attendants. Hired apiarists

are merely 1 per cent of the whole number.

In the majority of apiaries old style hives are still used. According to statistics gathered in 1894 there were only 13 per cent. of frame hives in use. It may be safely assumed that this percentage has doubled since then.

The spread of frame hives in Russia is not at all the same in the various provinces of Russia. In 11 provinces there are 20 to 70 frame hives to each hundred. Frame hives in most common use in Russia are the Anglo-American, Dadant-Blatt, Root, Levitchky, and Dzierzon. The most popular hives are those of Dadant.

There is noted a general quantitative improvement in various territories which are especially adapted to apiculture. Thus for instance in the Kuban territory:

1893 number of hives 170,545,
1898 number of hives 299,218.
1898 number of hives 528,218.

In other words the number of the hives increased more than threefold in five years. Good results are also attained in Siberia, particularly in the region of the Altai mountains. More risky is the pursuit of apiculture in localities which have a more severe climate, where the loss in the course of a year may amount to a half of the whole bee colony. Thus, for instance, in the Ufa province there were 522,150 colonies at the beginning of winter, and only 258,736 remained for swarming, about 263,714 perishing. This is about 50 per cent. Starvation 54.9 per cent., foul brood 1.4 per cent. The causes of destruction were classified as followed: Spoiled honey 35.1 per cent., cold 7.7 per cent., mice 0.9 per cent.

Bee-keepers in Russia suffer a great deal from the habit of the bees of gathering honey from coniferous trees, what is called "honey dew."

In several portions of Russia foul brood is a source of considerable dam-

age, and Russian apiaries are seeking means to combat this dread disease. Salicylic acid seems to give the best results among all the means adopted. Also formic acid, formaline and the transferring of bees to new hives.

Most of Russia abounds with honey-furnishing vegetation, which yields a good harvest for bees, both of honey and pollen. We may name the Linden tree, willows of every kind, acacias, apple trees, plum trees, pear trees, etc., raspberries, all sorts of clover, buckwheat, lucerne, mustard, etc. In many localities there is possibly a harvest of 150 pounds per colony in the season. The maximum harvest of honey per day is said to be 17½ pounds.

One of the weak points of apiculture in Russia is the lack of orderliness in the sale of its products in the interior of the land. Prices for honey and wax are subject to fluctuations. In some localities good extracted honey is sold on an average for 10 cents, while honey in the comb is sold at 15c per pound. In other places it is difficult to obtain even half of the above mentioned prices. Bee-keepers in out of the way places are altogether at the mercy of dealers who earn great profits from the labor of other parties. Lately there is more and more comb honey put in tin boxes of various sizes and taken into commerce under the name of "Exquisite," and sold at very high prices—25 cents, 30 cents and over. The sale of honey in this form is considered more profitable than in sections.

There are about 98,379 tons of honey produced throughout the Empire, the value being \$4,250,000. The consumption of honey inland is distributed as follows: As a table delicacy 23,604 tons, or 89.3 per cent. of the whole production. About 596 tons are used in manufacturing—2 per cent.; 725 tons or 2.7 per cent are used in the production of honey cake. In the production

of honey beverages, such as fruit waters, lemonades, preserved fruit, condiments, syrups, about 1851 tons or 5.5 per cent. is used. There are finally consumed 18 tons or 0.3 per cent. for medical purposes in pharmacies.

With regard to the export trade in honey products, it appears that during the five years 1890-1895 there were exported from Russia 826 tons of honey and from 1895-1899 only 344 tons. This export business is rapidly decreasing. In 1901 only 29 tons of the value of \$5,776 were exported. The imports of honey into Russia during 1895-1899 amounted to 1,291 tons, to the value of \$184,500, or on an average per year \$86,900. In 1901, 91 tons to the value of \$10,906 were imported from abroad.

The annual production of wax in Russia amounts to 8,676 tons. The production of bees wax is a little more than one-fifth of that of honey. Twenty-two tons of wax were exported from Russia in 1895-99, but in 1901 only 3 tons to the value of \$2,185. The imports were as follows: 1897-1900, 9,001 tons to the value of \$4,685,500, or in other words the average annual imports for that period amounted to more than 2,258 tons to the value of \$1,221,-000. In 1901, 2,872 tons of wax were imported, the value being \$1,574.536. In 1902, 3,561 tons to the value of \$1,997,500.

It is thus seen that Russia pays to foreigners for the products of apiculture more than \$2,000,000 annually. The task of Russian apiarists is how to retain this sum paid to foreigners, in their own hands, for which reason they have to increase the production of wax 2258 tons, or about 1.1 pound per hive. Or they must increase the number of hives by 3,466,960, in other words bring up the entire number of hives to 7,573,000. The intense interest shown by Russian apiaries in the problem of improving apiculture, their energy and activity directed to the

elevation and the propagation of this industry, give me the right to state that the sum of money above mentioned which is now paid to foreigners will remain in the country and will be employed in the improvement of the industry. The natural resources of the land also champion this view. All that we need is knowledge, and with the spread and increase of popular education, knowledge has begun to enter the most distant nooks of the land. Personally I have the most absolute faith in the future of apiculture in our fatherland.

In conclusion, in behalf of the Bee-keepers of Russia, and as their first representative to a Convention of American Bee-keepers, I extend to you the cordial greetings of the Russian Apiarists. We feel deeply indebted also to you for the many ideas borrowed from America to advance bee-keeping in Russia.

On motion of Mr. York duly seconded the convention adjourned at 7 o'clock p. m.

FOURTH SESSION.

At 7 o'clock p. m. the President called the convention to order.

DR. BOHRER: I have been very much interested in the paper and I regard it as one of the most exhaustive reports I have ever heard from this or any other country and it will be no discredit to have it published side by side with our best statistical reports, and if it were possible for this Association to make an application and succeed in having it published by the Department of Agriculture as well as having it appear in our National report I should very much desire to see it done.

I desire now to have this Association tender to the representative from Russia a vote of thanks for the excellent report which he has given us.

MR. ABBOTT: I consider this one of the most exhaustive papers I ever read

in my life. I only regret that the paper was not put into my hands so that I could have become a little more conversant with it and could have read it more intelligently that it might have done more credit to this foreigner who evidently has given this subject more thought and more close and careful study than the majority of Americans; and I most heartily concur in the motion and if there is any way to add emphasis to it or to make stronger I say Amen.

DR. BOHRER: We want to tender through Mr. Titoff to the Russian Government a vote of thanks.

MR. WHITCOMB (Neb.): The yield of wax reported here is extraordinary, even the honey flow is extraordinary. We fail always to get wax and honey at the same time. I would like to hear from the gentleman how they can do that. I am finding no fault with the report. I do not want to make any objections to it but it does seem to me to be a terribly strong statement.

The President put the motion, which on a vote having been taken was declared carried.

Mr. Abbott moved, seconded by Dr. Bohrer that Mr. Titoff be invited to speak as an honorary member.

The President put the motion which on a vote having been taken was declared carried.

At this stage the President introduced to the audience Miss Ethel Acklin, of St. Paul, Min., who favored the audience with a solo entitled "The Hum of the Bee."

Mr. Dadant moved, seconded by Mr. Hyde that a vote of thanks be tendered Miss Acklin, which was carried with applause.

MR. STILTON: Mr. President, we were appointed this morning to visit some of the representatives of the foreign nations on the Fair grounds. We, this afternoon, called upon the representatives of eighteen or twenty of the foreign nations. We were very

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cordially received and some of them promised to be here this evening. Our Russian friend, Mr. Titoff did not talk a great deal with them but our French friend, Mr. Dadant found opportunity to do a great deal of French talking. If any of those representatives are here this evening we would like to have them come forward or if they come in during the evening they will be presented to the audience by Mr. Dadant.

Some of the foreign commissioners who were here a week or so ago have left the city so that we did not find some of the men we were after.

Dr. Miller moved, duly seconded, that the report of committee be accepted and the committee discharged. Carried.

The President called on Prof E. N. Eaton, of Chicago, Ill., to address the convention on

'FOOD FRAUDS AND FOOD OFFICIALS.'

PROF. EATON: Gentlemen of the National Association of Bee-Keepers, I regret very much I could not give this subject the attention which the importance of it and my interest in it would warrant, but if I had not been able to do a thing except come here this evening I should have done so to show my interest in this cause. It is a matter of pride with me that I have attended conventions of bee-keepers every year I believe for ten years, beginning in Minnesota and the North West Association in Chicago and two or three of National conventions, and I want to say although I never owned a bee in my life I have received a great deal of benefit from every convention I have attended, not alone as a chemist, but I believe that meeting with you has brought me nearer to nature where I believe a man gets his best enjoyment and happiness; I have also been benefitted as a food chemist. Every food chemist should become acquainted with every industry manufacturing or

placing food on the market. Unless he becomes familiar with the technical aspects of the question he cannot correctly interpret his own analysis. If the food commissioners and chemists had attended any one of your National, State or local meetings they would never have made the statements which they have made and the falsehoods which they have distributed all over the country in regard to the adulteration of comb honey and the manufacture of honey by feeding bees glucose, and this brings me to the subject of my paper proper. The subject is a rather odd subject for a chemist or one engaged in just the opposite sort of work from this. We are supposed to hunt out food frauds; we are working in the dark always. The chemist that manufactures is always working in the light while we are looking for adulteration. This time I want to speak to you about adulteration which does not exist. I want to speak of some of the crimes committed by food commissioners and chemists in the name and pay of the people.

It is certainly a pleasure to meet again with the bee-keepers and talk over with them subjects about which you are naturally interested. It is with no little pride that I have scarcely missed attending a convention of bee-keepers.

And from these conventions I have always derived some good, not alone in bringing me nearer nature in whose atmosphere I believe man obtains his highest enjoyment but in widening my knowledge of my own field of work—food chemistry—and the broader and higher aspirations it leads to, the protection of the public from impure and adulterated food.

The food chemist must understand the technical side of every food industry or he will not be capable of correctly interpreting his own analysis. If many food commissioners, chemists and even government chemists had received a training in bee-keepers' conventions,

they would not have made so many reckless, untrue and hurtful statements regarding the adulteration of comb honey and the fraudulent honey obtained by feeding glucose to bees, and this brings me to the subject of my paper, a rather odd one for a food official, that is, the crimes committed by food commissioners and chemists in the name of public service and in the pay of the people.

The nature of their crimes in these, the wide spread publications of adulterations which do not exist, to the detriment of parties handling legitimate goods.

I may illustrate the statement by referring to incidents and facts which have come under my observation as a food chemist. First, in England it was so widely spread that calves' brains were used to adulterate milk and tests to detect them were given in all the early text books of chemistry.

Chalk in milk and sand in sugar are other food frauds—to use the term in a new sense—which are ultimately indispensable to the editor of the comic magazine.

All the old food laws contain a long list of impossible things to find in vinegar, candy and sugars, and it must be the form of a galvanized stomach indeed who would glance at this list and not thank God for the food commissioner.

Lately we hear a good deal about harmful materials found in candy and every little while a newspaper breaks out with a case of poison produced by eating these toothsome sweets.

The National Confectioners' Association, through their secretary, makes it a point to investigate every such case and so far he has not found a bit of truth in any of them.

Then there is the wide spread falsehood of the wholesale adulteration of honey produced by feeding bees glucose and the still worse fraud of cheating the bees entirely and manufacturing honey comb and all. All bee-keepers know

how absurd these statements are and how utterly impossible it would be to make them were the authors of the statement familiar with the manufacture of genuine honey. But one commission after another contributes an interesting article upon this subject to his local press and it travels from ocean to ocean. But while a food commissioner who is not expected to be a food scientist may make a blunder of this kind, occasionally, especially as it has passed current for so many years, it is less excusable in the chemist, and to a chemist must be attributed the first widespread publicity of the lie. It was as long ago as 1881 that an article appeared in the Popular Science Monthly by the now renowned chief chemist of the United States Department of Agriculture, from which I quote the last paragraph. "In commercial honey which is entirely free from bee medication the comb is made from paraffin and filled with pure glucose by appropriate machinery."

Later when the paragraph had attained the most widespread publicity and the bee-keeper questioned his right to make the statements—the author explained that they were meant for a scientific pleasantry and even accused the bee-keeper of being dull in comprehension in not quickly seeing the joke.

The bee-keeper could not question the spirit or mood in which the article was written but held that it was a sad subject to joke upon, and it is probably a source of regret to the chemist that his humor was not discovered by the hundreds of papers which up to this very day reiterate it.

But the statement was made and its trail of trade damage is still in its wake.

What is the cause of these unwise statements? First, perhaps desire for publicity. Second, to alarm the public to a degree of food adulteration. Third, thorough ignorance.

Sometimes it seems that a little exaggeration of the adulteration of food is not an unmixed evil, as the public will

awake to the importance of protection themselves, yet, truth is the better guide, and especially where falsehood injures large industries as it has in honey, candy, flour and other food stuffs.

MR. YORK: Dr. Eaton is the chemist of the Pure Food Commission for Illinois and he has attended a number of our conventions in Chicago and has talked to us on these subjects in which he is so deeply interested and I am glad, for one, we have such a chemist connected with the Pure Food Commission who takes so much interest in honey and bees. I want to move that a vote of thanks be tendered him for his interesting paper to-night.

The President put the motion which was duly seconded and on a standing vote having been taken it was declared carried unanimously.

THE PRESIDENT: We feel proud to be honored with a man of this stripe who fearlessly comes before any organization, it matters not what, and tells the truth.

MR. REINECKE: I think if you let a paper like this come before the Associated Press it will do a great deal of good.

DR. BOHRER: I regret that the gentleman did not make a motion to the effect that there be an effort made to have it published through that channel and if it be in order I move that that be referred to the Press committee.

MR. HYDE: I second the motion.

The President put the motion which on a vote having been taken was declared carried.

The President called upon Mr. E. R. Root of Medina, Ohio, to address the convention on

"COMB HONEY CARNARDS AND THEIR EFFECTS ON CONSUMERS."

MR. ROOT: I intended to bring over here certain papers that have been publishing certain statements with reference to comb honey. I don't think

the members of this Association really know what has been published in the papers. You have had a sample of it, but that is mild compared with some of the stuff that has gone out during the last six months. I have a few papers that I will bring over tomorrow so that you can see them if you desire.

I wish to say before I begin the reading of this paper that you could not have anticipated my suggestions in regard to some things that this convention should have done, any better than you did this morning during the time I was at your session; and perhaps I had better leave out that portion of my paper as you have already carried out some of the suggestions. They tell about great minds going in the same channel, I am glad my mind has been along the lines that you carried out this morning.

I have one letter here, which, with the permission of Mr. Hutchinson, I will read a sentence from as indicating what the scientific men in this country think of comb honey. You remember Prof. L. V. Allyn said something about comb honey being manufactured containing paraffine and glucose, and something else, as if that was an evidence of manufacture. When that was called to his attention as a mistake he wrote to Mr. Hutchinson and I will read this sentence: "The finding of a large percentage of paraffine and glucose in comb honey and in addition reading many references from scientific papers naturally leads one to suspect its adulteration."

I doubt if there is a more important question to come before this body of representative bee-keepers of the United States than the one before us now. The recent canards and sensational stories published in reputable papers and magazines about Yankee ingenuity, combs made of paraffine, etc., have deepened the distrust that was already existing in the mind of the public as to the purity and genuineness of our product. So

persistently have these stories been circulated from time to time in the daily papers, especially in their Sunday editions, that consumers believe that it is an unquestionable fact that can not be successfully contradicted, that the beautiful little combs on the market are not the work of the bees, but the consummate skill of man. But these lies are not confined to current literature. If we turn to some of our standard works of reference, cyclopedias, cook-books, medical works, and the like, we shall be surprised to see how many of the writers of note, and scientific men who ought to know better, tell, in all soberness, that much of the comb honey on the market is manufactured by man out of paraffine, filled with glucose, and capped over by machinery. When these so-called authorities vouch for such statements in the standard works on the shelves of our homes, can we wonder that the comb honey lies break out every now and then in the magazines and papers? Nearly every year has seen its quota of comb honey canards; but the year 1904 surpasses them all. Let us glance for a minute at some of the leading publications that have given currency to these comb honey stories.

First on the list is the Ladies' Home Journal, one of the most widely circulated magazines in the world. The editorial writer, Dr. Emma Walker, based her information on statements made by the professors in colleges, and the writers for encyclopedias, etc., instead of going to practical men who should know, if any one, the truth about their business. Then there was the Pittsburg Gazette and the Cleveland Plain Dealer, in their respective Sunday editions, The Sioux City Tribune and a dozen others, each one of them leading journals for their respective parts of the country, that have helped to give these stories a boost. Then there was Professor Allyn, of the State Normal School at Westfield, Mass. He sent a statement to the Springfield Republican, to

the effect that he had a sample of manufactured comb honey which he analyzed and found to contain glucose and paraffine; and, worst of all, that it was on display at the great St. Louis exposition. A number of these papers, in response to a deluge of letters from bee-keepers and bee-journal editors, have published retractions. It should be stated, in this connection, that Mr. Frank Benton, of the Bureau of Apiculture, at Washington, D. C., has rendered no small service in getting corrections.

The Sunday papers are the worst offenders of the whole lot. They are nothing more nor less than cheap magazines containing a great deal of good as well as bad. A large amount of the stuff they publish is sensational, intended to be such, to make the paper sell. One large Sunday metropolitan journal, in defending its course in publishing such a sensational lie about comb honey, did so by quoting Barnum's old saying, that the dear people like to be humbugged. It admitted to our representative that it had no foundation in fact for the story it published; that it instructed its reporter to get up the biggest yarn he could, and he did. With this plain admission we got retraction, after a good deal of hammering, and a final threat to sue them for damages.

All that I have thus far said is familiar history to the average reader of the bee-papers. So frequent have been the appearance of these stories that the bee-keeping public has become hardened. While the bee-keeper himself is angered and disgusted beyond measure, he has been in the habit of forgetting all about it; then when there is a lull in the re-occurrence of the lies, he rests easy, thinking that no harm has been done. But the object of this paper is to show that a fearful damage *has* been done to the comb honey market, and you now demand the proof. Here it is:

It is well known, I think, that there was a large crop of comb honey in 1903, and a very light crop this year. If you

will compare the markets you will see that there is no advance in prices. On the other hand you will see that the market is described as slow, easy, or indifferent; while last year, in spite of the large crop taken, it was described as firm. Had it not been for the articles published in some of our representative journals about manufactured comb honey, we might expect the market this fall to be unusually firm; but look at the quotations, and I think you will see that that condition does not now exist. Suppose, for example, that we had had a light crop last year, and a heavy one this year. The comb honey lies that have appeared would have made the prices go all to pieces; but because of the scarcity of the general crop, we have been barely able to hold our own.

Of course, I do not claim that prices are now unusually depressed. The fact is, they have not advanced as they have on other products and I think this is because, very largely, the general public does not care to buy what it supposes to be glucose put up in fancy paraffine combs that are as perfect as the eye could wish.

Again: Bee-keepers who have peddled their honey around to customers direct are met on every side by the question, "Is your honey made by the bees?" In some cases it is almost impossible for the honey producer to convince them that there is no such thing as manufactured comb honey, even when he offers to give them \$1000 if they will furnish the evidence. In all the articles published in the bee-journals, I do not remember one in which the peddler did not refer to the distrust of the public as to the genuineness of his product. So difficult has it been to sell comb honey that some of our bee-keeping friends have been compelled to cut the honey out of the sections, mix it with a good grade of extracted, rig out as a farmer who has got a few bees, and, presto! that very same honey would go like hot cakes, without a question as to its purity. In the South

chunk honey is getting to be quite a specialty; and it may be that in the North, in some localities where these comb honey lies have got in their deadly work, our bee-keepers will have to cater to the chunk-honey trade.

In the course of our business, within a year we have hundreds of travelling men who call upon us to sell raw material of various kinds. When they see our crates of honey they slyly ask the question if they may be permitted to know how we make the stuff, supposing, of course, we are headquarters for the product. Great is their consternation when we tell them that there is no such thing as manufactured comb honey, and that we will pay them \$1000 if they will produce a single sample of artificial comb, filled with glucose and capped by machinery, so close an imitation that it could not be readily told from the genuine. They tell us everybody out their way believes comb honey is manufactured; that they would buy honey, and would buy quantities of it for their own family use, but they did not care to pay a dozen prices for glucose and paraffine. Now, travelling men are a class of people who go over the entire country, and know pretty well what people think. It is their business to feel the pulse of the public, and they know it. When they say, as some of them have said, that there is not one person in ten but believes that comb honey on the market is manufactured, they are getting painfully near the truth; and the very people who should know this truth are the bee-keepers themselves.

But this is not all. Two or three of the prominent commission houses in our leading cities have written us that they used to sell comb honey by the carload where now they sell it by the ton. This was before the days of the honeycomb lies. Other commission men will tell you that there is a strong distrust on the part of the buying public as to the genuineness of the ordinary comb honey market.

But you may wonder, then, why people buy comb honey at all if they believe it is manufactured. Fortunately not every one believes these lies, but those who do, buy it just as you and I do canned fruits and vegetables which we are afraid are preserved with deleterious chemicals such as formalin and salicylic acid.

But there is a partial foundation for these comb honey lies, and it rests somewhat on the fact that there is a large amount of inferior comb honey in the city markets. It is dark in color; or, if not dark, it is off in flavor. People buy it. It does not taste like white clover for which it was sold; then they shake their heads doubtfully, and say, "There, I told you—this comb honey is manufactured. It does not taste like the honey I used to get on my father's farm."

It is my opinion that dark and off-flavored honey, if we except buckwheat, which has a strong and positive demand in the East, should not be put in sections, but extracted, and sold to the manufacturing trade—the bakers and the confectioners.

It is also my private opinion that, were it not for the general belief that comb honey is manufactured, we should get from a third to a half more for our product. The local bee-keeper who peddles his honey around home, who bears an excellent reputation, as such people generally do, who has taken pains to educate his trade as to the purity of his product, can usually get from a half to third more for his honey, because his trade knows that his goods are directly from the hive. In a way, then, the comb-honey lies help the bee man who sells his product within a hundred miles of his home. But how about the large class who cannot take the time to sell their honey, but must get rid of it with the least expenditure of time possible by shipping it to the city markets? These constitute a class who are in the great majority, and should be protected.

Having now stated the actual conditions, the question naturally arises, "What are you going to do about it?" We have been hammering at the newspapers, and getting retractions, you say, and have been partially successful, and still the lies go on. The trouble is, we *bee-keepers are not half aroused to the danger* that confronts the comb honey business. We have not hammered at the newspapers half enough. Every time these canards appear in public, the purveyor of them should be deluged with thousands of letters. Force of numbers is what counts in a campaign of this kind, as recent experience has shown in the case of the Ladies' Home Journal, Pittsburg Gazette, and some other periodicals of that kind. If the bee-keepers of the country depend on the editors of bee-papers and manufacturers of supplies to get retractions, they must make up their minds to keep on with these low prices. All the bee papers will do their part if the subscribers will do theirs. You see the point is right here. When one of these offending editors or publishers has letters coming to him at the rate of a hundred a day for the matter of two or three weeks or a month, he begins to think something will happen, and that if he cares to hold some of his clientage, he had better make a retraction. If those letters are courteous, appealing to his honor as a man, they will have ten times more effect than if he is abused and called a fool.

I recommend further that more bee-keepers seek to develop their home markets. Distribute more leaflets direct to their trade. The leaflets show the character of comb honey, tell about the different flavors, and then go on to show that \$1000 has been offered for a single sample of manufactured comb honey that is a close imitation of the genuine product of the hive. Some leaflets published by Editor York, of the American Bee Journal, are excellent. Copies of

them can be obtained, probably, at this convention.

Nor can we stop right here. This convention should take hold of this matter, should pass suitable resolutions urging the Board of Directors of this grand Association, of which we are so proud, take hold of the matter in a way that will mean something. The time of talking and crying about the matter is past. What we need now is action. I would suggest that the Board of Directors be urged to set aside a certain fund, which can be used to pay some competent person not only to get retractions, but to write interesting and original articles for magazines which directly and indirectly tell how comb honey is produced, and which will show conclusively that there is no such thing as the manufactured article so much hawked about in the papers.

In this Association we have a number of men who are perfectly competent to do this work under the direction of the Board of Directors. It is not enough that the articles be written, but that a representative from the Association itself be sent direct to the offending publisher or editor, and explain to him the facts, taking along some samples of comb foundation. In the case of the Ladies' Home Journal, Mr. W. A. Selser, a member of the Board of Directors of this Association, was authorized to go and see the publisher, and explain the facts. He was nearly discouraged, but he persisted until he got something that was a good deal better than nothing. The officers of this Association are now scattered all over the United States; and the Board of Directors could, at a very small expense, send one such officer to the paper publishing such lie, and, if possible, secure a retraction and correction. In the mean time, the bee-keepers should act in concert, getting their subscribers to deluge the publisher in question with letters of protest.

I suggest, further, that the Board of Directors appoint some one to visit the

people who make "boiler-plate" matter for the press. By this I mean cast stereotyped matter which is sold to the small publishers at so much a column. An interesting story or sketch could be written up; and if the boiler plate people will accept it, the facts about comb honey could be circulated over the entire country.

I should like to suggest further that every member of this Association, as occasion may present itself, invite his local editor down to see him. Show him an extractor and the comb honey supers; let him examine pieces of foundation, show him how it is used, open up the hive, then get him to make a little writeup if he will; but be very sure that he sees the proof before it goes to press. With the best of intentions he may make a bad matter worse. For instance, he may talk about comb foundation as artificial honey comb, how it saves the work of the bees, etc. His idea is correct enough, but his use of terms is unfortunate. Within a year a reporter of one of the large metropolitan dailies called at the home of the honey bees. We took occasion to tell him all about comb honey, but particularly requested that an advance proof or type written copy be submitted to us before it was published. This the reporter agreed to do, but he must have forgotten it. But imagine our surprise when, in the Sunday edition of his paper, comb foundation was confused with artificial honey comb; and this was mixed up with another statement there was no such thing as manufactured comb honey. A slight change in the wording here and there would have made an accurate statement, acceptable to bee-keepers and creditable to the reporter and publisher alike.

I wish to suggest further that the President of this Association appoint a press committee whose business it shall be to wait on any reporter who may come into these meetings, and furnish such reporter with these facts, and that they get, if possible, a proof before the

matter goes before the public. The reporters are bound to come here; and if they are not intelligently and carefully waited on they will get a mess of mixed-up stuff that will do us more harm than good.

There is just one more expedient that can be employed to bring these publishers to time who will not retract, and that is, a suit for damages. The A. I. Root Co., was about to begin an action against a daily during the past summer. We had gone so far as to instruct our attorney to begin proceedings. We wrote the publisher just once more, asking them what they were going to do, if any thing; that our business had been damaged, and that we proposed to take the proper means to protect ourselves if we could not get redress in any other way. In about a week we secured a very handsome retraction, and then the publishers wrote in a very humble way, asking if that was satisfactory.

Our attorney tells me he believes the bee-keepers of the country could successfully bring suit, in some cases at least; and I am of the opinion that some such action should be begun. The probabilities are that in nine cases out of ten the offending publisher would accede to our demands before actual proceedings could be instituted.

But suppose he does not. A case in court would attract attention, and would be heralded over the country, and this of itself would show to the newspaper publishers, as well as to the public at large, that there is no such thing as manufactured com'b honey, and that, if they took a hand in publishing or rehashing these lies they might have to pay dearly for their experiment.

It should be understood that an action cannot be sustained in every case. A great deal depends on the nature of the allegations in the first place.

There is something more that can be done; and that is, for bee-keepers individually to offer a reward for a single sample of manufactured comb honey.

It does well enough to say that the A. I. Root Co., will pay \$1000 for such sample; but who is the A. I. Root Co., to the ordinary consumer of honey? But if the bee-keeper himself, especially if he is known to be responsible to that consumer, can make an offer of \$25, \$50, or even \$100, such offer cannot help silencing the purveyor of the lies.

MR. ABBOTT: I move that a committee of five be appointed by the chair as a press committee representing the various localities of the United States whose duty it shall be to act without pay, to look after all matters pertaining to the interest of honey in the public press.

Mr. Root has suggested an excellent idea. There is a press committee here, but their duties cease at the close of this convention. If you had five people in five localities who would be co-operating and felt it their duty to look after these things and to co-operate with the Board of Directors and when in their immediate locality to write an article and turn it over to John Jones or whoever it is and let him put it into the paper in his own name, I think it would be a good idea.

MR. MUTH: I second that motion.

MR. SCOTT (Ind). I had in mind it would be well to have more than five. The United States is a big territory and it occurred to my mind that five could not very well gather all of these statements. I wish to say with reference to the suggestion offered by Mr. Root that it is very good, but if the Association gets an article out why not have that printed in large quantities and supply all the honey dealers with it. Everyone, especially those who are members of the National, could use them to the best advantage, even if we had to pay half the price for printing. Personally I feel to present a printed article of that kind in the name of the National Association would have much more weight than if I did it on my own responsibility. I have so much

faith in that that I would take 5,000 of them right away.

MR. ABBOTT: I will enlarge my committee by permission of the seconder, and make it fifteen instead of five.

MR. DADANT: I believe it would be advisable to have the editors of all the Bee Journals in the United States on that committee. There is no one who can get hold of these slurs published in the press as well as the men who are publishers themselves. They are more likely to read all these items or to have them sent to them by their subscribers than anybody else. We bee keepers who only read the Bee Journals and do not get hold of the general press would not notice these things as well as the Bee Journalists and it seems to me those men ought to be on that committee and they can act for us. Those things ought to be crushed out.

MR. WHITCOMB: In my experience I find that the stories of adulterated honey do not come through the newspapers but through the customers. I find the grocery men taking a very inferior comb honey and pointing it out as good. The customer takes the cheap honey at a good price. I find that in Lincoln and Omaha. One of the tricks of the grocery trade is to sell to the customer a poor inferior section of honey, half capped and half filled at the price of a good section.

MR. REINICKE: If this was put in condensed form and each of us could scatter them and could get them in the local papers it would have more weight than it would in the Bee Journals.

MR. ANDREWS (Cal.): I would like to see this include the whole meeting of the National convention and let it go into Canada and Mexico if necessary.

MR. VAN DYNE (N.J.): Mr. President, there was a motion acted on the other day and referred to a committee and that committee did not have the written resolution with them in their session and the latter part of it was

passed over and that referred particularly to this same question, and that was that this convention ask every member to go to their county paper and ask them to publish this reward of \$1,000 for two boxes of comb honey filled by hand or by machinery in the United States. The fact of merely publishing this offer would settle the whole business.

DR. BOHRER: Let your committee be fifteen if you wish it but I want every bee keeper to consider himself a committee of one to attack those charges through the local press.

The question was called for.

The President put the motion to appoint the committee, which on a vote having been taken was declared carried.

The President stated that he would report to the convention in the morning the names of those whom he would appoint on the committee.

MR. ROOT: I would like to make a suggestion and that is that the editors of the Bee Journals be left out of that committee. There is no doubt but what the editors will do their part; they are very much interested in this question; but include other men. What we want is to give these things a good hammering from different sources.

The President called for the report of the committee delegated to attend the Pure Food Congress.

Mr. York, on behalf of the committee reported that he had attended the Pure Food Congress but had arrived there before they had begun their session; that he had met the Secretary Mr. Allyn and had given him the resolution and acquainted him with the facts and that Mr. Allyn had promised that he would read the resolution the first thing after the opening of the session.

On motion of Dr. Miller, seconded by Mr. Abbott the report of the committee was received and adopted and the committee discharged.

The President called upon Dr. Miller for a song to which Dr. Miller responded by singing "I'se One of Those Happy Bee Mans," which was received with applanse.

The President called for remarks on Mr. Root's paper.

MR. JOHNSON (Mo.): In St. Louis this morning I found a man on the corner of 27th and Broadway who wanted to buy some honey, having seen the badge on my coat, and he said, "Do you have pure bee honey?" and I said, "You bet I have." To show you how superstituous he was he ordered six sections. He had seen this article in the Ladies' Home Journal.

DR. DRUNERT: Wouldn't it be much better for us as an organization to authorize our officers to say that we would sue every man and editor for damage that was not able to prove his assertion as to artificial honey? That would be a warning to all editors to go to the bottom of it and try to find out and see if they could prove what they published.

THE PRESIDENT: Mr. J. T. Adams, of Alabama, has presented a honey souvenir to this convention and at this time I wish to refer the same to our Committee on Resolutions.

MR. PRESSLER: I have sat in National Conventions before, and with the exception of speaker Reid, I believe I have never sat under a fairer, more conscientious or abler presiding officer than we have at the present time, and I believe it is the duty of the convention to give expression to that and endorse our present incumbent for re-election. I move that it is the sense of this convention that brother J. U. Harris, of Colorado, be endorsed as a nominee for re-election.

DR. MILLER: However heartily I might endorse this feeling I deprecate any such action. No matter who might be in the Chair, even the most inefficient officer, if some one should arise and offer a vote of thanks to him

for his able services, when he had been an utter failure, there would not be very many in the audience who would want to vote against that; and under the circumstances I certainly hope that no such vote will be taken; it is a bad precedent and if it goes to a vote I shall vote No, not because I object to the officer but to the principle and the precedent.

MR. DADANT: There has been no second to the motion.

MR. YORK: Mr. Chairman I would like to refer again to Mr. Root's paper which I think was a splendid one. With reference to manufactured comb honey so called, I have been thinking a good deal about it and I have been wondering if it would not be a good idea if every member of our Association, some 2000 strong now, would, whenever they see anything published about manufactured comb honey send a marked copy of that paper to our general manager. If this press committee is appointed he could then refer it to a member of the press committee in the locality from which the paper came, and that member of the press committee could then take up the matter with the publisher and editor. It seems to me every member of the Association ought to be requested to do this and they ought to have some one place to send all these marked copies. We, as editors, get a good many of them, but some do not think to send them. The general manager, if it is sent to him, can refer it back to the press committee and to the publishers of the papers. I have also thought when he heard of anything of this kind he should take it up in the name of the paper and write the editor or publisher of the paper and tell them that he represents this Association and asks for a correction, and if that is not forthcoming, then through the bee journals notify the members to write that editor and show him under. I believe the editors of the daily papers would pay a great

deal of attention to that. It seems to me if the matter were dealt with in this way we would get retractions with very little trouble. If finally they refused to retract, then threaten to sue them. I think we ought to have some system about this thing and work it up gradually. The General Manager should at the same time when he writes to the publisher of such a canard send him some of the printed matter we have talked of getting up. Prof. Benton is going to get up a bulletin and the Board of Directors is going to get up some facts. Let the General Manager mail them copies of these. After getting all that information I am satisfied that the average editor would be glad to make a retraction and will undertake to not do it again.

MR. CLARK (Iowa): A great many of these comb honey canards get started from the fact that the average member of the press is not familiar with the matter. If we had some way to reach the local as well as the general press and get these fellows to retract I believe we would have no trouble. This committee that has been suggested I believe would co-operate with the National.

Another thought that occurred to my mind was in regard to the syrups being fed to the bees and their storing it away. The production in that way of anything that resembles natural honey never has in my experience been accomplished. You can't any more produce honey that looks like natural in that way than you could by taking a hen and tieing her down onto her nest undertake to hatch out a set of chickens.

DR. MILLER: With regard to one point, that of trying to get a proper sort of retraction, we had two instances lately in the Ladies' Home Journal, one with regard to honey and the other with regard to a proprietary medicine. The two retractions were very unlike. In the case of the honey

there was this statement and that statement and part of it had no bearing on the subject at all, but the whole thing had the look that "perhaps" honey was not adulterated, that "perhaps" comb honey was genuine; that was the general impression. One of the things, and the strongest one perhaps there, had no bearing whatever upon the subject because it referred entirely to extracted honey and extracted honey was not in question at all.

With regard to the proprietary medicine it was a clean, solid, uncompromising retraction of the whole thing; an abject apology. I tell you what I think made the difference. I think the proprietor of that medicine went to them and said, "You retract that in the most unqualified manner or we will sue you and collect from you all we can. I don't know enough about this thing but I suspect that damages might be obtained from some one of these, and if in any single case a suit were instituted and damages obtained that would be a thing that would tell more than all the letters that would show them under. I believe if our General Manager could obtain damages in one case from any one of these publishers or even a retraction that it would help us in the other cases."

MR. ABBOTT: I fear some of our members have a wrong idea about suing. I want to say that the General Manager of this association has not any standing in any court of the United States; that the General Manager of this Association cannot sue anybody.

DR. MILLER: I told you I didn't know.

MR. ABBOTT: Well, I do know. This Association as an Association has no legal standing in any court in the United States because it is not a corporate body. If we want to be able to sue as an Association, this body must be incorporated. The individual

person damaged must show the damages. We are not as a body an entity and you cannot damage a thing that is not an entity in law.

DR. MILLER: There was an incorporation. Isn't this the thing that was incorporated.

MR. ABBOTT: If this body is incorporated, and has a standing in law, then this body can sue, but we must not lose sight of the fact that it has no standing unless it is an entity in law. All the suits made by the General Manager are not made in his name but in the name of the individual injured, and the General Manager must stand behind him and you must stand as individual men. In this case it was in the name of James Pearson, and he said, I will sue you for \$200,000, and they knew he would keep his word, but they do not pay any attention to this Association because it is not incorporated.

PROF. BENTON: I wrote to Ernest Root that the time had come when a suit should be instituted when there was a good case and I was in favor of sensational things, yellow journalism in general—the most successful thing that you could have go from the Atlantic to the Pacific that would reach the journalists. That is what we want; and when there is a good case somebody should go right straight to the man, and say, "We have \$2000 and there are men that will bring forward more thousands and we will put the thing right through if you don't come out squarely and retract.

DR. BOHRER: In regard to this body not being in a position to be sued or to sue, I agree with Mr. Abbott. If it is deemed necessary to have it incorporated let us do so. I move this body be incorporated.

MR. WEBER: I second that.

MR. FRANCE: I don't like to occupy a great deal of your time, but as an illustration, I was asked as you all recollect to reply to that article in the Ladies' Home Journal on behalf of

your Association. I did so to the editor and it was suggested that unless retraction in some form was made, satisfactorily, it might be possible the Association would take the matter up in the court and I got a reply immediately, "Are you an incorporated body?" I had to say "No."

MR. ABBOTT: I wish to say to you that you have to go a little cautious about these things. There are two sides to all questions. Sometimes it is an advantage to be an entity and sometimes it is not. If you are nobody you are not likely to get licked. If you are somebody you may drop up against a fellow that will give you a fearful licking. You are responsible for what you say and do when you get to be somebody. To get to be somebody we must get to be somebody at some special place; we must have an office and be identified with some special place under State laws. Are you going to be incorporated? Now most of them go to New Jersey when they want to swell their stock. Will you go to New Jersey or will you work it under the laws of Pennsylvania where you can inflate and blow and bust anything in the shape of a Trust or in the State of Missouri where they are pretty hard on corporations, or where do you intend to incorporate? Mr. Hershiser is better prepared to talk on this than anybody, but I spent two years studying law, and I got all these fool notions in my head. I think I am correct but if not I will stand corrected.

DR. BOHRER: Couldn't it be done under National law?

MR. ABBOTT: No sir, there is no such thing as National incorporation.

DR. MILLER: I thought that was a pretty good speech I made a while ago and I don't want to lose it all. If we can get the incorporation then the thing won't fall to the ground. In my answer to brother Abbott I was acting on the idea that there had been incor-

poration and there was, but that was something else and this thing is something different, and if we can get as near doing what was done before perhaps that will be well, and if we could be incorporated in the State of Illinois, being central, I don't know as there would be anything better.

MR. PRESSLER: I would like to move that this matter be referred to the proper committee because it is a delicate matter and should be carefully considered in the committee room.

MR. ABBOTT: I second the motion.

The President put the motion which on a vote having been taken was declared carried.

MR. RHEES (Utah): The idea has gone out that it was possible that honeycomb could be filled with some substance besides honey by the bees themselves. I don't think this thing is possible for several reasons, I tried to feed my bees some over heated honey and they wouldn't take it and I very much doubt if they would take glucose under any circumstances; and from what I have read I don't believe that honey producers have made a success in even getting honey stored in the honey comb. So far as sugar is concerned in my locality the wholesale price of sugar is a great deal higher than the wholesale price of honey and no sane man would think of feeding sugar and having it stored for honey. No bee-keeper will ever make a success of putting honey on the market unless he is a man of sound judgment. I think this idea that has been advanced that it may be possible for people to feed a mixture to the bees and have them store it and then sell it as comb honey should fade, it is impossible. It is impossible for me to buy sugar at six cents a pound and go to all the trouble of feeding it and then sell the honey at five cents a pound.

Mr. Abbott moved, seconded by Mr. York, that the committee to consider the

matter of incorporation consist of five members appointed by the Chair.

The President put the motion which on a vote having been taken was declared carried, and the President appointed as a committee Messrs. Abbott, Hershiser, France, Benton and Miller.

DR. MILLER: In reference to the remarks just made in reference to making comb honey from feeding sugar we must be a little careful and not go too far and it will hardly do to say that we cannot feed sugar and get comb honey because the price is too much. I can feed sugar and get comb honey made and the price of comb honey will be nearly three times as much as the price I can get sugar for. I don't know whether there is any profit in it or not. I am simply stating that the price of comb honey may be two or three times as much as the price sugar is now.

MR. KRETCHMER: I would like to ask the doctor if he ever estimated the actual cost of feeding sugar in building comb?

MR. RHEES (Utah): Dr. Miller and I live in two different sections of the country. We have no beet sugar factories in our country in Utah; we have land that is capable of growing beets in that locality but the sugar people are working for their own interests. The wholesale price of honey is about six cents a pound and I am offering my honey crop of 6000 pounds at five and a half cents; the package cost me three quarters of a cent. That is extracted honey. If I were going to feed bees anything I would not feed them sugar at six cents a pound, I would prefer to feed them the honey. Take California, Colorado, Idaho, Utah, Nevada and Arizona and the figures will stand the same.

MR. ABBOTT: I want to go on record again in the statement. A few years ago a noted professor and some others talked this subject and discussed it

and I asserted then and I assert now that there is no similarity between the product produced by feeding sugar to bees and making honey and the natural honey; that sugar put into combs by bees is sugar syrup and nothing else and not honey; I defy anybody to prove it is honey or anything like honey.

MR. KRETCHMER (Iowa): The syrup is entirely different from the nectar and can easily be distinguished.

Two years ago I gathered a small bunch of bees in the fall and I tried to experiment. I put them in a hive and gave them warm sugar, stirred it up well together with water, then I set it right before the bees and they came out nicely and ate it and I may state they produced the whitest comb that you ever saw in your life and I think before the other bees came robbing there was honey in there. I would state the poison the bees mixed with it keeps the honey and that honey is just as good as if taken out of the flower.

MR. STEWART (Mo.): With regard to the statement made this morning that glucose could be fed and made into the form of comb honey and sold, I have had a little experience on that line. I have taken glucose in the scarcity of the honey flow and tried to get a colony of bees to eat it. I tried it in a half a dozen different ways. One trial was I took clear white glucose that the grocery man gave to me and I spread part of it on top of the brood frames and marked that hive. I looked every day for five days to see how much of that was eaten, and I couldn't see that it was reduced in quantity at all. I took my knife and tried to scrape it off and it was like so much India rubber. Then I took some of it and weighed two quantities, putting in part of the quantity with honey and part with glucose. I kept increasing the quantity of honey until I got it at least half or two-thirds honey, until I got the bees to eat it. So I say that

clear glucose cannot be given to the bees and made to appear in any manner as comb honey.

MR. ROOT: I have conducted almost the same experiments as the gentleman who has spoken, with the same result. I took glucose and daubed it all over the front of the hive and daubed the bees up so that they would clean each other off and they wouldn't do it; I put it out in the yard and put the honey with it and I had to make it about fifty per cent. honey before the bees would touch it. Very recently the Brooklyn Eagle editor came out and said bees could be fed glucose. Two of us got after him pretty hard and the result of it was he came out in a subsequent statement and said it could not be done, that he had a bee-keeper try it.

MR. DE LONG: I gave a statement at the convention in Nebraska in 1898 in regard to an experiment I had tried to feed bees on "glucose" when it first came out; it was five or six years ago; I got some of the glucose that was very nice and white. I thought it was granulated but it just kind of floured down someway. I thought I would dilute it and have two gallons of nice white syrup instead of one, and the next morning the whole of the stuff had decomposed and the dog wouldn't eat it. I want to say to Mr Root and this other gentleman that the reason a bee can't eat it and won't eat it is because it decomposes as soon as it mixes with the larvae and you can't fool a bee; they know what it is. You couldn't feed any of this audience on stuff that would decompose in a few minutes and make them sick and almost kill them.

This old nut that has been cracked about making comb honey, this Association ought to set that down as a famous old lie and those intelligent people of the Home Journal ought to know better than to publish such stuff. I eternally hate this glucose; it will kill the young bees in the larvae state when it

is fed. There is one miserable packing company that puts up a nostrum, I call it; they ship it up to Nelson, Nebraska, with a little piece of comb in it and call it pure California white clover honey. Those California folks know how much white clover grows out there. I said, that is a nostrum and there is no honey in it. There are very few bee men if they are honest, and there are not many of them that are not honest, that put up any such stuff; and I think this Association ought to pass a resolution that this old thing of manufactured comb honey is a notorious old lie. I told those folks up in Lincoln that if we wanted to, if we could make 200 per cent. on feeding glucose to the bees we couldn't do it, we would kill all our bees. It is as bad as foul brood.

MR. DADANT: The remarks made by the gentleman have suggested to me the idea that our convention should pass a certain resolution as to their opinion in regard to manufactured honey or adulterated honey, and I wish to present this resolution to be referred to a committee: "Resolved that this convention asserts that no artificial comb honey has ever been or can be produced. That there is no profit in feeding anything to the bees to fill the bees to be sold as honey. That the only successful adulteration ever made has been by liquid honey out of the comb."

This is a matter I think we can assert as a body and I believe it will do a great deal of good.

MR. PRESSLER: I would second the motion to adopt this resolution and refer it to the proper committee.

The President put the motion which on a vote having been taken was declared carried and the resolution referred to the committee on resolutions to report back.

DR. MILLER: At what price can I produce what appears to be comb honey by feeding sugar to the bees?

MR. STEWART (Mo.): We don't want you to feed any sugar, doctor.

MR. REINECKE (Kan.): We found it necessary one fall to feed our bees and we found we didn't get enough honey to pay for the sugar.

MR. HYDE: I do not believe anyone in the house can answer this question and I have asked Mr. Scholl, and if you request it, he will conduct an experiment next summer to arrive at a satisfactory conclusion.

THE PRESIDENT: I think that is a very kind offer on Mr. Scholl's part.

DR. MILLER: I move that we thankfully request Prof. Scholl to make thorough experiment upon this subject. I know he is competent to do it.

MR. KREBS: I second the motion. I know he is competent to do it.

The President put the motion which on a vote having been taken was declared carried.

PROF. SCHOLL: I am one of the bashful kind of little fellows and a little afraid; if I was a little bigger I might get up and do some talking, but the way I always do, I let my bees buzz and I do the looking on and let them work for me; and when I get into a convention I let the other people talk and sometimes I take notes of things, and when I get home I sometimes experiment and that is what I am going to do here. Instead of talking I am just going to listen and hear what you are going to talk about and then later on maybe I can tell you all something. I don't know whether I could tell you anything now or not. Maybe after I get through my excitedness I will buzz a little while.

On motion of Mr. Miller the convention adjourned till Thursday at 9 o'clock a. m.

FIFTH SESSION.

THURSDAY, September 29, 9 o'clock a. m.

The President called the convention to order and Dr. Miller invoked the Divine blessing.

The President called for reports of standing committees.

MR. HERSHISER: The committee on rules and order desire to report as follows "that the time for discussion and speaking be limited as follows: The maximum shall be thirty minutes on any one subject and no person shall make more than one speech on any subject without the unanimous consent of the Association." I desire to move that this amendment to the rules be adopted.

The President put the motion, duly seconded, which on a vote having been taken, was declared carried.

The President called for reports of special committees.

MR. ABBOTT: Mr. chairman, the committee on incorporation has looked the matter over carefully and they can simply ask for more time and they desire that the committee be continued until the next annual meeting when they will be prepared to present a thorough report. This matter is of vital importance and should not be one hastily.

On motion of Mr. York, seconded by Mr. Hyde, the special committee on incorporation was made a permanent committee to report at the next annual meeting.

READING OF PAPERS.

The President called upon Mr. Brown of California to present his paper on

THE COLLECTIVE DISPOSAL OF OUR PRODUCT.

MR. BROWN: I have touched this matter very briefly. It is a subject that deserves a great deal of attention. We could not do justice to the subject here in a place like this so I have only jotted down a few points which I hope will start the ball rolling in the right direction. (Applause.)

The individual disposal of our product is one which is well known to us all.

While it has some advantages, it has many disadvantages and unsatisfactory results. Perhaps it would not be out of place to mention a few conditions which call for this united action on the part of producers of honey to market their product collectively.

The good Book tells us, in II Timothy 3:2 "For men shall be lovers of their own selves," and we find that the buyers of honey, and the manipulators of the honey market, are quite apt to be included in the class mentioned in this statement. Another one of these conditions is, that the large consumers of honey, those that use quantities of from fifty carloads upward per annum, have united their energies with the buyers and commission brokers. This has brought about an effect that the price of our product, as individuals, is largely left to what they are inclined to quote us. For instance, one who offers a carload of honey to the market at San Francisco, which market is based upon the Eastern market, after being quoted his price, the firm who makes its quotation, is not satisfied to allow the seller the privilege of trying to secure a better price in the East, but will immediately wire his offer, with other information, to all the other links in this great chain of compulsion, located throughout the honey centers of the United States. And visa versa. The offers and quotations of the East are wired to the West, and all are agreed to stand firm on one common price, until competition, which is the "life of trade," is totally obliterated.

Really, the only competition that exists today in the honey market, is created by producers who individually market their honey. I think perhaps this phase of the question is so well understood by us, it needs no further comment here, and we will now turn our attention toward the subject of this paper, "The Collective Disposal of our Product." It is quite evident that the bee-keepers of this twentieth century

are looking forward to some escape from this Juggernaut, which is crushing the life out of trade. And it is quite apparent that a spirit of co-operation does already exist, which is the only thing that can bring about this change from individually to collectively marketing our product.

It is a fact, however, that among us there is a tendency to wait to see the plan developed before we venture into the project ourselves. This is the most dangerous ground we can stand upon. One can readily see that after he has produced a crop of honey that can be sold upon the general market for, say \$1000, and can get his money without delay, that he will hesitate to turn the selling of this to new and perhaps untried channels; and in order to succeed, we must develop a channel in which every producer among us will have full and complete confidence. It must be made up of those who have made a success of this very kind of work, and who have experience and talent. They must be people who are renowned in this line, and of whose standing everybody has a general knowledge. Also they must have a standing in business which they cannot afford to jeopardize for the paltry sum of a few dollars which they could make by being placed in this position of trust.

Let there be a Board of Directors made up of this class. Let the number be five. Allow them a salary to pay them for the time which they will spend in overseeing their employed managers. Give them power to open a central office, in which their manager will receive from local organizations, crop reports, samples of honey, amounts ready for shipment, and correspondence of every nature that will be directed to a business of this sort. Then let the smaller, or local organizations, with which the country is already well covered, use this general, or National Honey Producers' Association for their market. This will make a gigantic brokerage

system within our own ranks, one in which one and all can trust. Then it will come to pass that we will be the market, we will be the head and not the tail. We will be able to quote a living price for our product, and realize as much.

The points mentioned so far in this paper are readily admitted by all, but the question as to how we shall arrive at this point of success, is the one that now confronts us. The only way is to launch out. There was never a boat that floated until it had an opportunity. The time is now ripe and the opportunity is ours. Let this Convention appoint a committee who will name the first five Directors who will draw up the by-laws and report before this meeting adjourns. Let the glad news be sounded from this center, and the birth of the baby, which should be received in every quarter with much joy. Then every locality where honey is produced should be encouraged to organize, with the view before them that they are to patronize the National Honey Producers' Association for their market; and once in the stream we will move out in the breeze and lift our sails one by one as the occasion demands.

The organization should be a stock company, place the capital stock at \$50,000, and sell only to organized companies and associations. Limit each such company or association to one share for the company or association, and an additional share for every 25 members thereafter. Place the par value at \$100 per share, and the voting will be done by these associations or companies governed by a vote to each share. In this way we can always keep the management within our own control. No one person, or for that matter a few, can buy up the controlling interest in the association, dividends to be declared upon net profits, derived from the commissions made in the business, funds for sale of stock to be used as capital in which to establish the business.

In conclusion allow me to add, that we shoull lose no time in starting off this important work. We are losing far too much money each year to remain silent and appear to be satisfied when, as a matter of fact, we are not. The buyers and wholesale merchants have organized against us, and our only chance of escape now is through the same channel, organization. Let us be wise, and use our freedom while we find a disposition within our rank to do so.

MR. DIEBOLD moved, seconded by Mr. Andrews that the chair appoint a committee of five to devise methods for co-operation in the marketing of honey.

The President stated the motion.

MR. ANDREWS (Cal.): We have found in California from one year's trial that we could save the price it cost us to organize. We paid five cents per pound membership and we found we got back all we paid into it the first year. We found we could buy our supplies through this organization enough cheaper to pay all our expenses. We found another thing in marketing our crop, the great majority do not know when they are offered all their honey is worth. When we were ready to place our honey on the market the association had orders for something like eight carloads. The members would not turn their honey over at the price the association had fixed and consequently they had to pass those orders by. Many of them held their honey over a year and took considerably less then we had been offered at that time. Many of the men need money right at the time the crop is harvested and we need to provide some means whereby those men can draw on that honey and get money at a low rate of interest.

MR. ABBOTT: I am greatly interested in this matter. The query comes to me why this Association should stand by at the birth of a lion cub to eat up her own children. It

is strange to me we should take the time of this organization to organize a financial institution that could not possibly be a part or parcel of this Association. A great deal of this seems to sound very nice. For instance we were told that oranges were the same price in California as in Missouri. I stand here to say as a student of po'itical economy that transportation is a part of production, and that declaration is incontrovertible. Every man that brings an article to the place of consumption enters into the production of the article and if transportation is a part of production it is all fallacy to talk about oranges being worth the same price in California that they are in the State of Missouri; and that is the complaint that is made about machinery in the United States and in foreign countries; even sewing machines are sold for less money in foreign countries than they are sold for here and it is unjust and unfair. The paper further tells us that these buyers have combined and these supply dealers have combined and they have all combined and there is a great octopus with her mouth wide open sweeping over the country endeavoring to consume everybody and everything it comes in contact with. I ask you to point out the man that has made these combines? Show me where the men are that represent the honey combine in the United States. There is not any such thing in existence. I believe we can drift on towards socialism and make a social business institution but so far as I am concerned individually, I want to say the North American stands for the individual bee-keeper and not for a financial combine. I see no reason why we should organize another society to destroy our society. Let this Association alone as it is, a great brotherhood of people working for the common interest of all the bee-keepers of the United States, farmers, specialists and all.

MR. BROWN: I wish I could speak so nicely as my opponent here but I lack that eloquence. That does not make any difference; we can understand each other just the same. In the first place he said it was altogether out of place to get up in a convention like this. That is a criticism on our Secretary, Mr. Brodbeck, because he named the subject himself, and told me to prepare a paper. I say it is in place.

Another thing, this Convention in Denver two years ago appointed a committee, and I was one member of it, to draw up plans by which an Association of this kind might be formed. It is a fact that that committee did go out and did report at our last Convention in Los Angeles and the committee was appointed again, of which I was made Chairman, and I say it is proper at this time and in this place for this thing to be brought up. It is not necessary for this Association to be converted into this; it is not the intention that it should be so; but this is the place for us to take up this matter and protect ourselves against this gigantic honey concern, this combination that is combining and is crushing the life out of the honey market. Now I know whereof I speak when I speak about this formation and I can put my finger on them, I can tell you exactly who those people are. It is not well for me to give it out to the public and have it go into the press as to who these people are but they do exist; they do control affairs; they do control our honey market today and the thing for us to do is to organize and meet these things with organization, and I say it is properly in place before this convention. This matter comes up today right in perfect line with our work. Let us lend a helping hand to this new organization, and let in not interfere in any way with this association.

DR. BOHRER (Kan.): I hope the motion to appoint such a committee will prevail, but like Mr. Abbott I do not

want to create a monster that will gobble us all up. That some kind of organization is necessary is a fact, but be careful how you organize.

MR. DADANT: Mr. President, I cannot agree with Mr. Abbott in the matter of the propriety of bringing this before the convention. There is no greater interest among bee-keepers than the selling of their crop, and where are we to discuss our interests if not in our convention? Since I have been here I have met half a dozen of our bee-keepers who have asked me, What are we going to get for our honey? What shall I ask? What answer can I give them? The market prices are set by an organization. These people are organized and they are going to last; you can't kill the trusts; you can regulate them and tax them but you cannot kill them. The only thing for us to do is to organize, and you may call it a trust if you please. I hardly think we can start with a capital of \$50,000 but I think we can and should start with a committee that would tell our members, when they want to know it, at what price they should hold their honey. They can do it. If we simply stay together, and we will some day, we will get our prices just the same as the Tin Can Trust and can probably produce honey cheaper than than we can today, by being organized.

MR. COGGSHALL (N. Y.): I want to take issue with Bro. Abbott. There is a combination against honey producers. I went into Syracuse and wanted to sell honey to the bakery there and they said, you submit samples and send them to Chicago and then you will get your price. A combination as sure as you are born.

MR. STANLEY (Colo.) If there is any general combine in the honey business I have failed to become a member, and I believe my friend Weber would testify in the same way and perhaps there are other large buyers. Perhaps in

some local way the merchants may be able to combine to fix the price. I believe I would have found it out if it was extensive.

MR. HERSHISER: Evidently the gentleman who last spoke is too small in the business to have been a member of these combinations. I know these combinations do exist, and exist in the shape of the National Biscuit Company. I had occasion a year or two ago to sell a carload of honey for a party in Arizona and I submitted samples of the honey to the branches of the National Biscuit Company and the samples were sent to Chicago to be passed upon by the purchasing agent there for all the branches of the Biscuit Company, and the price was fixed and there was no deviation from it. There are a lot of small individual buyers that I suppose do not belong to this organization.

MR. STANLEY: I should have said. I handle almost exclusively comb honey and we handled something like 300,000 pounds of it last year.

MR. YORK: I think perhaps some of us misunderstood the paper. I think I did. Mr. Brown said there was a sort of combination that controlled the prices of honey. I gathered from that that there was a combination of honey dealers that was buying and selling honey. The National Biscuit Company does not buy and sell honey. They buy for their own purposes. As to Mr. Coggshall if he does not care to sell his honey at their prices he need not do so. I know the National Biscuit Company buys nine carloads at one time but I wouldn't consider them a combination to fix the price of honey at all. They are simply buyers for their own use.

MR. HARDY (N. Y.): There is one thing about this thing that I don't understand, this matter of assigning stock. It looks to me as though the small or ordinary purchaser of honey is going to be left in the back ground. We in New York State have joint

organizations which join anybody and make a State organization. He states a capital of \$50,000; the minimum amount of each share is \$100. Supposing as we have in the United States in a great many sections people that have no kind of organization, they belong to this National Association and nothing else, now where is this \$100 share coming from? There is no man in an ordinary way keeping bees but does his little local trade. In my case I get a little more for my honey. Supposing they find out I am getting more for my honey in my section and supposing this organization you propose to form finds that out, I have either got to put in the \$100 or else stay outside. They are liable to rush in on my market, and flood me, so that I will be obliged to take the lower price along with the common cattle. I would like to have a little enlightenment on this matter. Is this \$100 coming from our county or state organizations or where? I am not willing to trot after the band wagon. If you can't be a bell-cow don't be any.

MR. DADANT: The suggestion I made was especially in regard to giving prices as guides. I realize the fact that California and the East are entirely different. In California there are large purchasers. Sometimes one man will furnish several car loads, or two men get together and furnish the car load, and this matter of organization is much more important to them. But if there is a central organization branching out you would be very glad to write to them to find out what honey is selling for and that they are setting the price of honey. If you who deal in a small way in honey can find out honey is selling for more than you are getting, you certainly will raise the price. If you have a central organization which says, we will set the price at so much, it should not be too much, and they tell you ahead what the price will be, it will be a good thing; but if

you are blind-folded you will be at a disadvantage.

MR. ABBOTT: I understand the paper to mean just what Mr. York thought. I thought Mr. Brown meant that there was a combination of honey buyers and I wanted to know about that. Another thing Mr. Brown misunderstood, I do not object to discussing this question here or to giving out prices or anything, but the thing I objected to was the formation of that committee here. I have no objection to Mr. Brown saying we all want to organize, and then organize the whole Association if you want to into a company of that kind. I was not opposing that. I simply wanted it understood I didn't want this National Association to appoint the committee to make another organization. The discussion is on whether this committee shall be appointed or not appointed.

MR. PRESSLER (Penn.): Is this committee to be the permanent committee?

THE PRESIDENT: No, simply to report back ways and means.

MR. PRESSLER: There is no reason why this committee should not be appointed.

The question was called for.

The President put the motion to appoint the committee, which on a vote having been taken was declared carried.

THE PRESIDENT: The chair will deliberate on the appointment of that committee.

The President called upon Mr. N. E. France, the general manager of the Association to address the convention on a subject not named.

RECOMMENDATIONS OF THE GENERAL MANAGER.

MR. FRANCE: Mr. President and brother bee-keepers, you see I have been idle all the time since I have been here. In just this kind of idleness almost night and day for a year I have

been working for you. Our secretary, Mr. Brodbeck, wrote me he wanted a program that would be a credit to us and make this convention the best that had ever been—and I believe it is so far—and I said, I am with you in anything to make the National a success. Assign me any topic you please and if I am prepared I will accept it and if I am not I will try to be prepared. That is the secret of success in anything. But, it has been one continuous strain day and night to get material in shape to make this meeting a success. I wanted to put up illustration before this assembled body that has never been before produced, which would educate them, in the form of this map that I had advertised. To illustrate the point in view, if you would take samples of honey branded "white clover" from the various bee-keepers you would find there is a great variance and that somewhat affects our market. We do not all judge alike. We are not satisfied unless we all have one and the same price.

There are so very many duties that devolve upon this office that I hardly have time at home to know whether my family are there when I get home or not. This year my father, now past eighty, is not able to superintend the work at home and the two little boys you saw here with one older, have had the whole care of the house and between 400 and 500 swarms of bees and twenty acres inside the city which we pay \$60 taxes on. Men have asked me, "How many swarms of bees have you got?" Honestly, I don't know. We had somewhere about that number in the spring. I have been home occasionally a day. When I get back there is from one to three baskets full of National Association correspondence and I am right there at the typewriter until I go away again. So I am sorry to say I come before you to represent the National Association without preparation.

There is one thing I have felt from the beginning and that is that this Association has got upon a living basis; like the National Government at the close of the Civil War, it has now opened its doors to an endless growth. When you think of the endless bee-keepers in the United States and the comparatively few we still have in our ranks, what a chance there is there for development. Can we interest those who are not members to become a part of us? Our fees are not standing in the way for they are nearly all coming in now on the half rate.

The insurance part of the Association has given me a good deal of anxious, careful study. Hours that I should have had for rest have been, many of them, spent with attorneys who have been kind enough to give me their advice gratuitously. Largely coming from our city bee-keepers who get into quarrels with our neighbors not because of the bees but through their different affairs, and finally the bees are brought in connection with it and as a result they get into a quarrel and then step, as it were, back and say, "I belong to the National Association, I have got into trouble, you help me out." I am sorry those conditions have come about in our Association. I hoped the day had dawned when we would discontinue that and allow this Association to develop in these new phases of fighting adulterated honey, and creating a greater uniformity of market among bee-keepers over all the world. There are world-wide things we ought to be doing instead of these smaller and not so important matters.

In the extreme West where last year they had such a bountiful honey flow this year has been a failure in South California and much has been the correspondence there to save our National from litigation; the bees were in a starving condition. As a matter of fact if there is anything sweet exposed

the bees will work upon it, and the swarms of letters that have been poured upon me in behalf of the bees working upon fruits and the cries that the bees were injurious to it, have been very great, and it seemed for a time the bees were going to be removed from various cities in California. One test case of that finally came up and we have carried it through to a success, have gained our point, although it has cost the Association about \$200 for the attorney's bill; yet, it has quieted that section of the country. For those of us who live near neighbors, and our bees, in the spring perchance, should spot the neighbor's clothing, how nicely a little donation of honey, friendly given or paying for the re-laundrying of the clothing would settle all that grievance. If our bees go to our neighbors' trough or place where the water is obtained and they are an annoyance there, sweeten that away with a little kindly donation of honey. If our bees annoy our neighbors in a garden or upon the near highways, you know they can be sweetened in the same way. Oh, I have gone to various places and have compromised it without any litigation by just bringing the two parties together and having a little honey and new biscuits. Keep together, compromise, keep out of court. Be brothers hereafter.

You have many topics this morning that you would like to have discussed and to me one of the most vital things to the bee-keeping industry is to keep our colonies free from disease. The subject is to be fully discussed to-morrow and I hope you will be here. This National Association is in a shape, if you will join hands in union with me, that it can help you get the desired legislation. This Association can help to check largely this cry about the adulteration of honey, either extracted or manufactured as it was claimed in comb, but I can't do it alone; and as the editors of your bee

papers this summer past have asked you to swarm in your letters at designated points, I too have been in the same harness and have done the same. I have written those parties and I have asked others to do so and I believe it has had some of the desired effect. I issued a little pamphlet on bees and horticulture for the benefit of those who were receiving injury by people spraying fruit trees while in bloom. This became alarming in some parts of our country, and many apiaries suffered severely. The little pamphlet has had its desired effect, and I saw, after those were exhausted and many more called for, wherein I had made a mistake. We should have had it stereotyped so that we could issue more without having it all reset. We need more copies. Later on our city bee-keepers got into trouble and we needed some instruction on what the courts say pertaining to their cases. That also I gathered together as best I could hurriedly into a little pamphlet and it has saved our organization from what looked to be expensive suits. It was this little red leaflet. I hope the city bee-keepers will commit page 35 to memory pertaining to bees and their neighbors. To the new bee-keepers or new members, if there is any part of this literature they have not received and will make it known I will see they get it.

You have stood by the Association in her days of need and in a financial way it looks now as if it were on a basis of permanency. We haven't any great amount in our treasury. We had about \$1115, I think, at the close of the last year; and, anxious to get this report out early, at the time I closed up that part of the statement here a few days ago it was almost the same amount within a very few dollars, will be a little shortage on account of this \$200 suit which we will have to meet in California and there are some other things that may reduce that a

little but the additional membership coming in will very near off-set that. I don't believe this Association wants a big amount of money lying idle, but I do want to see this Association have a treasury we can fall back upon to spread educational literature abroad. (Applause.)

Let us stop this quarrelsome business and let the money go in some other way. I believe you know the workings of the Association. I am yours for all there is in it and I want you to stay by the Association. (Applause.)

The President announced the committee on National organization consisting of F. E. Brown, California, H. S. Ferry, N. Y.; E. E. Pressler, Penn.; J. Q. Smith, Ill.; and E. S. Lovesy, Utah.

Mr. Reinecke moved, seconded by Mr. Dadant that a hearty vote of thanks be tendered Mr. France for his excellent work during the past year.

The President put the motion which on a rising vote having been taken was declared carried,

The President called on Prof. Louis H. Scholl of College Station, Texas, to address the convention on:

"SOMETHING ABOUT TEXAS BEEKEEPING."

PROF. SCHOLL: Mr. President, ladies and gentlemen; I have not had time to get up a paper as I should have done, and, therefore I have only taken a few notes which I generally put down in this little book. I shall say a few words about Texas although I do not know whether it will be as a paper would have been. The trouble is I don't know what you all want to know about Texas. We have got a State down there, a big old piece of land and have some bee-keepers in there, and some of them are a pretty good size not only in the number of colonies but they grow big too. Now, most of you know something about the

statistics of Texas in the way of the production of honey. This last census gotten out in 1899 we have nothing to show exactly what we have down there, but I have been working on it in the way of getting statistics for our department and have obtained some figures that are considerably larger than the census reports got out. In getting these statistics I am trying to get a complete name list of the bee-keepers in the State and in that way I have them report to me the number of colonies they have, the amount of honey produced and other things, and thus I have gotten at some figures. I may say that we have over 400,000 colonies of bees in the State, and the amount of honey produced by these is only about 5,000,000 pounds, that is, the average per colony is only about twelve pounds, due to the fact that we have so many little one horse bee-keepers and box hive keepers, although we have some of the very best you can find anywhere, and some of them with large apiaries and producing lots of honey. Now, figuring on these colonies at that low average we have an output of more honey than any other State, and we claim that Texas is the lead in the output of its honey product. If that is the case with such a low average, where would Texas be with the average raise, which can be done because we have the country down there. If we improve our bees and everything we can have an output away beyond what we have now and in that case Texas would simply be away ahead.

Now somebody may be interested in the way I would divide Texas as a honey State: beginning with North Texas, north of Fort Worth, where we have very few bees; it is a plain, and nothing but cattle there and very little bee forage. In East Texas where we have our pine forests and oil and rice lands we have along the low places and rivers a good deal of bass wood,

quite an abundance of it and of holly, and these yield a large amount of honey but the trouble there is the country is not settled up yet and there are very few apiaries located there. Those that are located produce a whole lot of honey but the great abundance of the honey is of poorer quality. Take Central Texas, that is the great cotton belt; there we produce cotton honey mostly and there is where we have more of the horse mint, but of late years on account of the drouth this horse mint has become scarce and on account of the Boll Weevil which is one of our greatest evils down there, the cotton crop has been cut short. Take West Texas it is a somewhat mountainous portion and there are only some localities that produce honey properly, and sumach is the only honey plant worthy of mention. Then South Texas below Houston is a low swampy plain, and rice and things like that are produced more than anything else, and along the rivers and the lagoons and lakes we have the rattan vine which yields a lot of honey but it is of poorer quality. It is shipped to the northern market for manufacturing purposes. When we go to South-west Texas we go to a country that I do not think can be surpassed anywhere. We have there almost an unlimited amount of bee pasture; we have the Mesquite tree, the Guilla, the Cat Claw and many other things; even the prickly Pear with which some of the prairies are just covered, helps us out a good deal in some years. I have been asked a great many questions about locations in Texas for bee-keepers. I might say that we have many locations in South west Texas where bee-keeping could be carried on and large amounts of honey gathered, but most of these are away from the railroads and most of the land is sandy land and a person would simply have to go out and camp and batch out in the woods and haul his product to the railroad

stations, about 40 or 50 miles, and run things at long distances. South West Texas is not a very good farming country. It is only of use as a cattle country and for bee keeping. They both go well there. As these railroads are opening up the land, bee keeping will progress and open up new localities and the time will come when South-West Texas if properly stocked up with bees will be the greatest bee country I know of or have any idea of.

I would like to say a few words about apiculture at the Texas A. and M. college. I have had charge of the position there as apiarist at the Station and have charge of the apicultural work of the State and I believe that great good could be done by having such work carried on by the experiment station. I would like this so that other States might take up the work as they surely should do. I think much good could be done if they could do so. We have at College Station, Texas, an apiary of 40 colonies and a bee house and all the equipments necessary besides a good deal of other equipment which is mainly kept there for show and for the use of students, to get them acquainted with the different materials used, and I think we have the best equipped Station or Experimental Apiary anywhere in the world; at least it has been pronounced so by everybody that has seen it or knows anything about it. It was only established in 1902 when we received an appropriation from the State Legislature of \$750 to start with; that was for two years; for the next two years, 1904-5 we have received \$900 more and with this money we have been enabled to establish this apiary and all the equipment, and we have received from the college ten acres of land for the location, with a ravine running through it, all of which makes an ideal location for an apiary. We have put up a bee house which has been planned and built so that later on

it will be used as a plan to be given out to the bee-keepers so that they can copy after it and build ideal bee houses for their own use. We have in this enclosure about four acres of land in two fields put into cultivation for the testing of honey plants, and we have planted a good many different honey plants that have been written about and that we have run across, to see as to their value and whether it will pay or be profitable to plant trees. We have tried as many as forty different kinds for the last two years—forty-one different kinds this year—and we have found only a very few adapted to the conditions of Texas that will be profitable to plant for honey; these at the same time are planted for forage. Besides many of the experiments that we have carried on show that it would not pay to raise any of these others for honey alone. Further experiments will be carried on along these lines. We have been looking around also for honey plants or shrubs from further west, from the more arid regions, with the view of planting these in localities where the natural honey flow is scarce. If we could propagate plants from other localities, in other words, put up an artificial yield of honey it would increase apiculture and we could have honey producing localities where no honey is produced now. This will take a good deal of work and time.

In the apiary we have several different races of bees which are tried for different experiments. As we get their results they will be published later.

In the way of experiments we have a good many on our list. As time goes on it becomes more apparent that some of these experiments must be carried out by people who have some say so, who have some authority, so that after the experiments are made we have something to go by. For instance, when we went through this glucose and sugar feeding mist that comes up

every once and a while, if we had some authority on this subject, someone that could tell us just exactly all about it, it would help us out a whole lot. Some of these things are just exactly what we are going to do down at the Station. Last night I took some notes on these very things and we are going to try those. It takes time and money to carry out accurate experiments of this kind. I should say that work of this kind should be carried out at every State Station, and if the bee-keepers only will, they can have such work done. It was brought about by our bee-keepers down in Texas. We had our first meeting at College Station in 1901. While down there we made a request for an apiary at the college and an apiarist, where such work could be carried on. I am glad to say it succeeded although it took lots of hard work. We only secured a very small appropriation, \$750, but it gave us a start and now we enjoy having the best equipped experimental apiary anywhere, and are going to try to keep ahead of any that ever come up.

One of the experiments we have under way is the manufacture of honey vinegar. In these large apiaries there is always a waste of honey, and if we could manufacture that into honey vinegar and work up a market for it and sell it we could save a whole lot of money for the bee-keepers. Then we have a lot of cheap grade honey that should not be put on the market and which if put on, lowers the price good honey. We are trying to find out if this cannot be made into honey vinegar to more profit and thus save the price of the better grade honey. Another experiment we are going to start is along the wax and foundation line. We are going to try to find out the amount of honey consumed to produce wax. While it would not perhaps be profitable to convert the cheap honey into wax perhaps we could take this cheap honey and have the bees convert

it into wax and put it on the market in the shape of wax instead of offering them the lower grades of honey at a cheaper price, thus lowering the price of the better grade. We are also experimenting along the line of rendering the wax of old combs and along the line of such hives and accessories and other things. At almost every convention I attended last year, something like 14, the question came up, which is the best hive and similar questions, there also comes up the question as to the difference between the regular Langstroth and some others, and the divisible brood chamber hive. Some of these things will never be settled unless they are taken up by some scientific worker or somebody who will take accurate note of these things. If a bee-keeper has a hobby of his own he will bring up something and he will claim his way is the best and always have a hive of his own that he carries about with him. This is not the case with somebody that has this work in charge somewhere else. He wants to get down to the facts of the case; he does not care what the results will be; what he is after is to get at the fact and prove it and he will carry on the work until he is through with it and then come back and go over it and then when he gets through he has his results noted, and they are to the point. This cannot be done by the bee-keeper for a good many reasons, he hasn't the time and he has hives of his own and he is not accurate enough. He cannot because he has too many other things calling for his attention. All these things should be taken up by the Station.

Honey bottling is another one of our problems down there, in other words, putting up honey and preventing it from crystallization. It is quite an important problem and I don't know yet what we are going to do with it. The majority of consumers prefer honey in

a liquid state. We have some honeys there that granulate in a few weeks after being taken from the hive. Before we can put that on the market we have to re-liquefy it and maybe it will candy again. Sometimes we have honey on the road and it is delayed and when it reaches the consumer it is candied and he does not want sugar honey and it is returned to the bee-keeper. If we could find a way of putting up this honey; especially of putting it up in a fancy way, as some people put it up, and keeping it from granulating it will be worth a whole lot.

Besides this there are a great many other problems: the work of managing outyards at long distances with the least amount of labor and attention and trying to make the biggest amount of money out of your product. We have another apiary at one of the sub stations and we have made arrangements for co-operative work. Texas is so large and has such varied conditions that we have to carry on our work in different sections, which makes it harder for the apiarists at the station. The coming year we will take up work along more scientific lines. We have made a card catalogue of almost all of the scientific work that has been done, most of it taken from experiment station records. We did this so that we could see what had been done along these lines before we went ahead. We want to prevent all the repetitions possible.

At the College we have given instruction to the students in apiculture. The College has not been able to put on apiculture as a regular course because the time is taken up by other studies. They have made an elective study of it for senior class students, for the whole State; in this way we have had some State students but during the spring-time of the College we have a short course in apiculture and in this way we have 18 short-course

students last year who took apiculture and it prepared them pretty well for the work after they left the college. Besides this we have students working in apiaries during the season who work under the Student Labor Fund, and in that way they get a good deal of information.

There are many questions that come up that should be taken up by experiment station people. I think an experimental apiary ought to be established at each of the Experiment stations of the different states, especially those in which apiculture is carried on to any great extent and this can be done by bee-keepers if they only go after it. We did it down there and I think it can be done in other states.

MR. DIEBOLD moved, seconded by Mr. Abbott, that a vote of thanks be tendered to Prof. Scholl for the interesting address given by him.

The President put the motion which on a vote having been taken was declared carried.

The president called upon Mr. Moe, the representative from Cuba, who was escorted to the platform by Mr. Hyde, after which the President introduced him to the convention.

MR. MOE: Mr. President, ladies and gentlemen, I did not come here with the idea of making a speech and you will have to excuse me along any such lines. I came here to get what information I could along those lines of bee keeping that interest me. You are aware of course that the conditions with us are very different to what they are with you in many respects. Your bee-keepers probably have different methods, so do we, and it possibly would not be practicable or wise to tell you all about our methods because you could not take them back home and apply them. I do not read your articles on winter bee keeping because they are of no value to me, and possibly for me to go on and tell you about what we do would be of no value to

you. What interests me most is how I can produce the most honey, raise the best queens and sell my honey to the best advantage. The question of wax cuts some figure with us. We can produce that perhaps better than you can. When I commenced bee keeping there I wanted to do it perfectly according to what you call the right method. I have got into it this far that I am cutting the corners off and going across lots; I am not doing all the fancy wiring and full sheet foundation work; I found it didn't pay, we get so little flow of honey we have got to produce it. I think if you give the matter study and thought you will find that it is all in the location. That is all I have to say, Mr. President. (Applause).

MR. REINECKE moved, seconded by Mr. Krebs, that a vote of thanks be tendered to Mr. Moe.

The President put the motion which on a vote having been taken was declared carried.

The President called upon Prof. Benton to read a paper and introduced him to the audience as one who was doing more for bee keeping in the United States than any person he knew of.

Prof. Benton presented his paper, which was received with applause. The paper is as follows:

WORK IN APICULTURE AT THE UNITED STATES DEPARTMENT OF AGRICULTURE.

At the meeting of the North American Bee-Keepers' Association, held at Washington, D. C., December 27-29, 1892, Doctor C. V. Riley, then Entomologist of the Department, presented quite a review of what the Department of Agriculture had done, and what he conceived it could do for apiculture. Since it fell to me to prepare all of the data for this article I shall feel at perfect liberty to draw upon it freely in a brief review of what the Department has already

done in apiculture. In most instances, however, I shall quote literally from the communication presented under the name of Doctor Riley.

Doctor Riley started out by an allusion to the wisdom of establishing as a part of the government machinery, a Department of Agriculture charged with doing all it can to foster and encourage agriculture in all its branches. He believed that the advisability of this would not be questioned by any one who had made himself familiar with the work of the Department since its organization, first as a mere chair in the Department of the Interior, then a separate Commission, and later a department co-ordinate with the others, with representation in the Cabinet of the President. He believed, and I think with good reason, that, notwithstanding some things in the administration of this great Department might be better if changed, yet on the whole there exist fewer abuses and abnormal conditions in the Department of Agriculture than in any other of the Departments of the government. The great body of workers connected with the Department are earnestly interested in the branches which they represent, and devote practically all of their energies to the furtherance of the work in hand. It has been my lot to be associated in various capacities with these workers during the past 13 years, and I have come to appreciate most thoroughly the beneficial character of their work, and their singular devotion to it. I can also easily understand how Doctor Riley remarked in his article that "some of the most beneficent and far-reaching work of the Department was done during its earlier history, when its means were limited, and when the field was fresh, and the opportunities relatively greater." He then proceeds to state that: "It has been the desire of almost everyone who has been at the head of the Department to pursue a broad and liberal policy to the end that all the branches of rural economy might receive their due share

of attention." He states then the fact that must be apparent at once to all, namely, that, "The head of the Department is, however, helpless without Congressional aid and sympathy, and it has too often happened that investigations which promised valuable results have been abandoned because of the failure of Congress to make the needed appropriations." Then, after an allusion to the direct value of the products of bees, and the far greater value which results to the country through the fertilization of our seed and fruit producing plants, Doctor Riley says:

"Fifteen years ago, when I first accepted a position in the Department, there was provision only for an entomologist without assistants or means for any experimental or field work. During the next four or five years I succeeded in impressing the Commissioner of Agriculture and Congress with a sense of the importance of the work to be done in efforts to counteract the ravages of injurious insects, and the appropriations for both office assistants and field work increased. But the self-evident advantage of endeavors to protect the farmer from some part of the immense losses occasioned by insects, had to fight its way into recognition. It was not until 1885 that the more important work done in counteracting the ravages of injurious species had sufficiently advanced to justify my giving some attention to apiculture, and the fact that nothing more resulted from the work begun may, to some extent, be laid to the lack of effort on the part of the bee-keepers themselves, i. e., to their failure to take united action, such as would bring home to the head of the Department, and to those in charge of the general appropriations, the needs and just demands of the industry.

However, that considerable has been done by the Department, and through its agency, for bee-keepers—much more, probably, than most of you are aware of—the published reports of the De-

partment show. These reports, hundreds of thousands of which have been distributed very generally over the land, have surely had their influence in the promulgation of intelligent and humane culture of bees. Beginning about the time of the first edition of Langstroth's celebrated work, or nearly a decade before any bee-periodical had been printed in the English language, the Department reports have from year to year given some notice of progress in bee-culture, statistics of honey and wax production, and on several occasions excellent little treatises on bees and bee management. Notable among these is the article on the nature and habits of the honey bee, in the report of 1857. I cannot give the name of the author, as only the initials of the Chief Clerk of the Patent Office are attached to it. In 1860 Mr. William Buckisch, of Texas, gave, in an extended article, a review of bee-culture as practiced by Dzierzon and his school. The essay by my old friend, Mrs. Ellen S. Tupper, of Iowa, published in the report of 1865, and covering her theory of bee-keeping, was widely read and frequently quoted, creating much interest in improved methods.

The introduction of Italian bees into this country is certainly one of the advances in bee-culture which ranks second only to the invention of the frame hive, the honey extractor, and the comb foundation machine. But how many even now know that the Department of Agriculture had anything to do with the matter? Leading text-books on apiculture are silent on this head. The fact is, however, that the first successful importation of Italian bees from their native land to America was made by the Department, and it was almost wholly from this importation that such skillful apiarists as Langstroth, Cary, and Quinby bred and disseminated the race during the early '60's."

It must be remembered of Doctor Riley that he was a man of brilliant

conception, and also kept in close touch with popular sentiment and growth in all matters pertaining to agriculture, and that naturally wherever his own field of economic entomology was concerned, he was in the front as to its needs and possibilities. He was not a skilled bee-keeper, nor, in fact, could he ever have been classed as a bee-keeper, but, nevertheless, he had, many years before his connection with the Department, manipulated bees to some extent, and had made some study of methods in apiculture, as well as of the habits of the bees themselves, so that it is not surprising that he was disposed to view favorably, in 1885, the establishing of an apicultural experiment station in connection with the entomological work of the Department. In this he was earnestly supplemented by Mr. N. W. McLain, who was, I believe, an old time acquaintance and an enthusiastic bee-keeper, and who became the first appointee. There was, at the time, no special appropriation for apiculture, nor indeed anything of the kind during the whole of Doctor Riley's administration of the office of entomologist. I mention this to show that all the more credit is due to Doctor Riley in connection with the work then undertaken, and which, though interrupted through lack of funds, he resumed later. The funds to initiate this work, and to continue it for a period, as well as to resume it after the interruption just mentioned, were drawn from the general appropriation for the Division of Entomology, and were diverted by the entomologist himself from the general insect work to this special purpose in the belief that he was fulfilling both the letter and the spirit of the law which authorized the expenditure of certain sums for the promotion of economic entomology.

Just here I must digress somewhat, lest those familiar with what has been printed on this subject should call me to account for the above statements, by referring to a biographical sketch of Mr.

W. K. Morrison which is found on page 554 of *Gleanings in Bee Culture* for July 15, 1898. This article was written by Mr. A. I. Root, and submitted by him to Mr. Morrison himself. Mr. Root says, concerning Mr. Morrison:

"While at Washington he became intimately acquainted with Senator Teller, Secretary Rusk, Senator Plumb, and others. As he still held on to his interest in bee-culture, at an opportune time, as it seemed to him, he was permitted to urge that an appropriation of \$5,000 be made for the benefit of bee-culture in the United States, and he was successful in securing this appropriation. Prof. Cook took hold of it about a year after the money was given, and I do not know but friend Cook had the credit of it, although Mr. Morrison, if I am correct, was the first mover in the matter, and the one who finally secured the enactment."

When the article was submitted by Mr. Root, to Mr. Morrison, including this paragraph, the latter made as a comment, over his own initials, the following statement:

"Besides myself and the secretary, no one knew. Dr. Tinker was the first to know. Secretary Rusk pledged the Senate committee not to spend money on the study of wild bees, but to put the money to practical purposes. Prof. Riley did not like this. Secretary Rusk also pledged himself in writing that I should be the first appointee."

Nothing can be further from the truth than the statements here made. There was no enactment whatever, nor appropriation of \$5,000, nor any other sum for apiculture at the time indicated, (1885-87), nor, in fact, was there ever a special appropriation for apiculture previous to the year 1901. The following table taken directly from the records of this department will show that, aside from the appropriation for general work, the only specific appropriations made were in the years 1887 to 1890,

when provision was made for experiments in silk culture.

APPROPRIATION FOR THE DIVISION OF ENTAMOLOGY.

Year ending June 30	Salaries	General ex- penses for Entomo- logical Investi- gation	Specific ap- propriation for silk Culture
1884	\$7900	\$20,000	
1885	7900	20,000	
1886	7900	25,000	
1887	7300	15,000	\$15,000
1888	7300	20,000	25,000
1889	7300	20,000	30,000
1890	7300	20,000	30,000

It is a manifest injustice also to the memory of Doctor Riley to intimate that he wished to spend the money on the study of wild bees to the neglect of practical apiculture itself. Doctor Riley was eminently a practical man, and the fact that he did divert from the general sum appropriated during a series of years for entomological investigations a certain portion to experimental work in apiculture, is proof of itself that he was disposed in a kindly manner toward this industry, and saw the possible benefits which could result from scientific investigations of problems connected with the industry. I cannot regard as any more felicitous the intimation that the first republican secretary of agriculture, whose record in other respects is above reproach, should have broken a pledge given in writing.

It was in 1885 that Doctor Riley secured the establishment of an apicultural station at Aurora, Illinois, which was in charge of Mr N. W. McLain. Experiments were conducted during that year and the two following years, under the direction of the Entomologist. There was good work done during this period notwithstanding the severe criticism of certain jealous writers, and I am disposed to agree in the main with Doctor Riley's statement that 'there is probably not one of Mr. McLain's critics

who would have done more of real benefit to apiculture during the same period and under the same circumstances.' I have but to mention among the recorded experiments those conducted by Mr. McLain to determine whether bees could injure sound fruit or not. The results have been very widely quoted and pointed to as authoritative, and the report has done a great deal to prevent misapprehension between fruit growers and bee-keepers. For several years following this the Entomologist felt unable to continue the work, but in 1891 a series of experiments were conducted at the Michigan State Experiment Station by Prof. A. J. Cook, assisted by Mr. J. H. Larrabee, under the general direction of the Entomologist. The arrangement, however, did not prove extremely satisfactory, nor did the work done meet, by reason of originality or decisive results, the special approval of the Entomologist. It was shortly thereafter discontinued when the commissions expired. Meanwhile it had been Doctor Riley's desire to undertake the securing of the giant bees of India, and he had addressed a letter to me while I was abroad offering me a commission to proceed to India and secure these bees. At that time, however, I had started on my way back to my native land, after an absence of 11 years, and his first communication finally reached me while in New York, having followed me up from my last address in Austria. Owing to technicalities, however, Doctor Riley was unable to secure the authorization to send me on this mission, with which it was his intention to couple certain other work, such as the securing of the caprifig insect (*Blastophaga psenes*) which was so much needed for the pollination of the *Syrmna* figs in California. Having become intimately acquainted with Doctor Riley's views on all of the subjects, I can positively assert that he was perfectly willing to undertake continuous and progressive experimental work in

favor of the aparian interests of the country, had the funds of the division of Entomology permitted this. But having been blocked in the first work which he designed me to undertake, he lost much of his interest in taking hold of the problem which presented itself of establishing on a permanent footing a section for apicultural experimentation, especially as my services could be utilized for the time being in the general work of the Division of Entomology, while at the same time such correspondence as came to the department relative to apiculture was turned over to me for attention. The changes which followed rapidly after this, resulting in the placing of Doctor Riley's first assistant in the position of Entomologist, and the sudden and untimely death of Doctor Riley himself, somewhat changed the status of matters, and it has only been rather gradually that the importance of practical experimental work, and the need of scientific and systematic investigations in apiculture have been sufficiently impressed upon the authorities to result in a more liberal policy toward this industry. Meanwhile, however, records of interest have been accumulating, thousands of letters of inquiry relative to apiculture and aparian interests in the country have been answered, and many thousand bulletins treating of aparian management have been sent to all parts of the country, and even many to foreign countries, in response to requests which come daily for information. It might be said that the department has practically, for a number of years, conducted a correspondence school in apiculture, since every inquiry, of whatever nature, received careful attention, and, if it required a specific answer giving the best information at hand on whatever topic the inquiry covered. Moreover, large numbers of teachers in the normal college of the District of Columbia, and the public schools of the city of Washington, as well as teachers of nature

study in other cities, have been furnished with information and specimens of bees for use in their class work, and numerous demonstrations have been made for the benefits of these teachers, as well as frequently for large classes under them, including the class in the normal school who would shortly become teachers in charge of public schools.

Realizing that it is the constant dropping which wears away the stone, I have, during the 13 years I have been connected with the United States department of Agriculture never permitted to pass unutilized an opportunity to create in the mind of those in authority there a favorable impression concerning the dignity of apiculture as a pursuit, and the needs of the industry in connection with scientific experimentation. With this I have, however, studiously avoided being obtrusive, preferring rather to use patience and perseverance and bide the opportune moment for presenting the claims of our pursuit. All along I have noted a growing interest in the subject at the department, a feeling, in fact, to use the words of many of the scientific gentlemen connected with the experimental work there, that "there is far more in this business of bee culture than we had formerly supposed." They have also remarked that it needed extended scientific investigation as to the zoological, botanical, and chemical sides of the subject, as well as from the practical bee-keeper's standpoint. At last I have the intense satisfaction of seeing this matter duly appreciated, and the proper steps taken to insure the investigations which we all so much desire. During the years when no special fund could be devoted to apiculture I still continued to do, largely on my own time and at my own expense, some experimental work, particularly with honey-producing plants which I tested quite extensively during a series of years, with various foreign races of bees, and in regard to methods

in queen rearing and methods in the successful wintering of bees in the open air. My own apiaries were largely devoted to these experiments, without regard to the evident decrease in the honey yield which must necessarily result. Queens of various foreign races were reared, and certain crosses produced between these races, and sent to certain State experiment stations, and to certain portions of the country, where it seemed desirable to test the particular strain in question. Numerous notes and observations for further use in the work when it should be firmly established, were collected from time to time, and plans for experiments and for observations and study of apicultural conditions in all parts of the country were made. During this period the title borne by myself was that of Investigator in the division of Entomology, and later Assistant Entomologist. Finally, in 1901 these efforts resulted in the setting apart of a special appropriation for apiculture of \$2,000, the first and only special appropriation which has been made for this branch. My own title was changed to that of Apicultural Investigator, and my salary, with that of a temporary assistant for a few weeks in the summer, were charged to this fund, which left really but a few hundred dollars for investigations. This small sum was utilized to continue the work already started and to make way for a more permanent organization. Since, however, it was not sufficient for the establishment of a well equipped apiary, my own personal apiaries were still placed at the service of the Department. Unfortunately the disposition on the part of legislators seemed to be to make appropriations in the form of a lump sum, rather than specific, so that instead of reaffirming this specific sum, it was absorbed into the general fund of the Division of Entomology in subsequent enactments. The result of this seemed to make it difficult, as there was no mandatory clause regarding the amount

to be devoted to apiculture, to secure any definite setting apart for this work, although the theory of a separate section in the Division of Entomology devoted to apiculture, was recognized, and certain light expenses, together with stenographic services, allowed.

This brings us to the opening of the present fiscal year, July 1st, 1904. I have quoted from Dr. Riley's article his allusion to the fact that the work which he began so many years before had to be interrupted, and I have also mentioned to what he attributed this, to some extent, namely: "to the lack of effort on the part of bee-keepers themselves, i. e., to their failure to take united action such as would bring home to the head of the Department, and to those in charge of the general appropriations, the needs and just demands of the industry." In this connection I should like to call your attention to the fact that I had strongly recommended to the National Association which met in Albany the year before, i. e., in 1891, some action looking to the development of a separate section or division devoted to apiculture here at the Department, and that a committee was appointed at the Albany convention which made the following recommendations:

- 1st. That the Section of Apiculture in the Division of Entomology, Department of Agriculture, be raised to an independent Division.
- 2nd. That in connection therewith there be an experimental apiary established at Washington, having all the appointments necessary to a first-class Apicultural Experiment Station.
- 3rd. That the appropriation for this Division be sufficiently large so that the work may not be embarrassed for the lack of funds.

Had these recommendations been followed up by the proper influence they might long ago, I believe, have been carried out, but the matter rested in this shape for a long time. However, I

should not leave the subject without mentioning the substantial encouragement which has been given to the lastest effort for development of apicultural work at the Department, and in the first rank I must allude to the efficient aid and influence given by the active chairman of the Board of Directors of the National Bee-Keepers' Association, Mr. W. F. Marks, of New York; and the able editor of *Gleanings in Bee Culture*, himself one of the board of directors as well, Mr. E. R. Root, of Ohio; to the worthy President of the National Association, Mr. J. U. Harris, of Colorado; to W. Z. Hutchinson, editor of the *Review*, and himself a member of the board of directors; to Dr. C. C. Miller, of Illinois, another of the directors, as well as numerous friends who have taken occasion to voice their sentiments with their representatives in Congress to the end that they should support such measures as have been so long recommended and so earnestly striven for during this long period of more than a decade. It is in the end a substantial victory to the apicultural interests of the country, which is not passing, but permanent, and whose results I hope will continue and grow long after all who listen to my voice shall have passed away.

Thus, at the date mentioned, July 1st, 1904, after long effort and repeated representations to authorities at the Department and legislators themselves of the needs of such general work in entomology, and particularly in the various economic lines grouped under the general subject of entomological investigations, the Division of Entomology was raised to the rank of a bureau, with what is practically a Division of Apiculture. And while the appropriation is still in the form of a lump sum, there is set apart a definite sum for apiculture, which leaves, after the payment of salaries, some \$5000 for experimental work. I have been allowed two assistants, each bearing the title Special

Agent in Apiculture, and one whose title is that of Apicultural Clerk, and in addition to this, stenographic service. As my first assistant I have been able to secure Mr. John M. Rankin, of Michigan, a student and experimenter in apiculture, with whom many of the members of the National Association are well acquainted, and whose name is familiar to many others in connection with his former work as State Inspector of Apiaries in Michigan, and before that was in charge of the experimental work at the Michigan State Agricultural college. He is a graduate of the institution just named, and a young man of excellent habits from whom we may expect valuable aid in the general work in apiculture at the Department. As the second assistant Mr. Leslie Martin, of Tennessee, an enthusiastic student of apiculture, has been engaged. He is still young but has had several years experience in practical work with bees, and has already shown perseverance and intelligent attention to the subject. A civil service examination has been held for the position of apicultural clerk, and we may hope an intelligent assistant will soon be appointed to fill this position. The Department has granted the establishing of a model apiary of 50 colonies, and through competitive bids the contract has been awarded to a bee-keeper in the State of Maryland. The bees have been delivered and will shortly be located in their permanent place at the Arlington Experimental Farm, connected with the Department of Agriculture. This farm is located on the Virginia side of the Potomac River, directly across from the Department grounds. I believe that the location will be fairly isolated, and thus that any particular race we choose to establish there may be bred, with excellent opportunity for preserving its purity. At the outset the new race imported from the Caucasus of Russia will be established in

these colonies for a thorough test, and for the purpose of crossing with other types.

THE WORK TO BE UNDERTAKEN.

I shall pass very briefly over this, since my historical review of the development of this as a branch of the work at the United States Department of Agriculture has been rather more extended than I had planned; and furthermore, I prefer that the work we shall undertake, when completed, shall speak for itself, rather than that I should make at the present time many words over mere plans.

The fitting up of a model apiary at the Arlington Experiment Farm, which is under the control of the Department, the building of a bee-house, laboratory, and workshop combined, and getting together of all of the necessary implements, hives, queen-rearing outfit, tools, chemicals, etc., for the conduct of experimental work, will necessarily consume a little time. The bees have been purchased in the open market, after bids had been advertised for and received. They have been delivered in good shape, and are now prospering on the wild aster which blooms so abundantly in the latitude of Washington in September and October. This part of our work is, therefore, well under way. We have already taken steps toward the procuring of seeds and roots of certain important foreign honey-producing plants, and have secured the co-operation of the Bureau of Plant Industry at the department, which is in charge of the introduction of new and valuable forage, seed, and fruit crops, as well as the congressional seed distribution, which latter is largely confined to the distribution of vegetable, flower, and forage-crop seeds, most of which are already known in this country. The Bureau of Plant Industry will undertake to secure, at the suggestion of the Apicultural Investigator, seeds of such important forage and garden crops as

have not yet been brought to this country, and which are valuable as honey producers. We are, therefore, ready to file applications for small quantities of seeds which we shall endeavor to send out with discrimination so as to gain the best results possible with seeds adapted to the region of the applicant. In the aggregate there will be considerable quantities of these seeds, yet anticipating that the demand will also be lively, it is expected that only a small quantity for testing can be sent to individual applicants.

It will be the policy of the Department, in its apicultural work, to co-operate with all State bee inspectors, whenever any co-operative work is desirable, provided, of course, the sum at the command of the Department for this purpose admits of this. During the first year not a large amount can be turned in this direction, however; but it is to be hoped that in successive years the original purchasing and fitting up of a department apiary having been accomplished, there will be more opportunity to undertake a more thorough investigation of all known contagious bee diseases.'

Naturally many interested in seeing the giant bees of India and the Philippines (*Megapis dorsata* and *zonata*) tested in their native countries, and perhaps in this country also, will inquire what we shall do about this. Some other, more wise in his own view, and desiring to point his finger and poke fun at the apicultural investigator, will at once reply: "Oh, that is one of his particular hobbies; assuredly he will let everything else go and fly off in a tangent on this wild bee (goose) chase." But hold, good friend, not so fast. We are trying to keep a weather eye peeled and peer in all directions in order not to allow anything of importance to escape our notice, and in order to be able to estimate at its true worth any possible line of investigation. This being our attitude, all

may rest assured that we shall not let any investigation of the great bees occupy either the whole time nor the whole sum which may be devoted to experimental apicultural work. The matter is, however, a larger one than the mere getting and testing of these bees for their value as direct honey producers in the United States. It is in itself sufficiently valuable, from a scientific standpoint, to warrant its being undertaken, for this reason alone, at an opportune time. The comparison of the breeding habits, qualities, structure, and general life history of these great bees, will afford much that is instructive, and settle long disputed points that all will be glad to have at rest once for all. There is a further reason for undertaking to find out what we can concerning the bees of the Philippines, namely, the opportunity which would at the same time be afforded for studying the possibilities in practical apicultural work in those rich islands which extend over a thousand miles from north to south, or from Boston, Mass., to Savanah, Ga., on our eastern coast; or from St. Paul to New Orleans, in the Mississippi Valley; or again from northern Oregon to southern California, in the west, and with all variations of mountain, lake and valley, sea exposure, swamp and jungle. Here is a vast field in which at least it is our duty to study the possibilities, and point out, if possible, the way to success. No step will be taken without careful consideration, but action once decided upon will be pushed with all possible speed and energy. But what will we do? Wait and see, and meanwhile give us your advice.

Numbers of queens of valuable races, and select strains of certain races, are being imported and tested. These include the extremely gentle Caucasian bees from the shores of the Black and Caspian Seas in Russia. Cyprians from the Island of Cyprus, which have

proven their prepotent value as crossing material; Dalmatians from the Province of Dalmatia, Austria; Italians from the foot-hills of the Alps, in the extreme northern part of the Kingdom of Italy, where the most industrious type of this race is to be found; and lastly Carniolans, from the most elevated districts of the Province of Carniola, in Austria, a type which, by reason of its gentleness, excellent wintering qualities, hardness, and prolificness, has shown itself of great value in this country, especially in comb honey production. Daughters of these races, and various crosses between them, will be bred for testing, both here and at numerous stations. We are particularly desirous of securing unbiased tests on a sufficiently large scale to enable us to decide the exact value of each of these for any and all parts of this country.

If it is possible it is proposed to test, more fully than has heretofore been done in this country, the employment of artificial heat in the wintering, and more particularly in the rapid breeding up of bees in early spring. It is certain that artificial heat may be successfully employed to produce such results. The question then arises whether it is at a profit or not, in view of the expenditure of means and time required.

It is likewise believed that there is great room for improvement in the hives and accessories concerned in migratory or pastoral bee-keeping, at least as this system has thus far been practical in this country.

Whenever the experiments and field work here indicated do not fully occupy the time of the experimenters and office force, there is an indefinite amount of additional work which may be followed up, such as, for example, collecting data regarding the apicultural industry in the United States, first as to the principal honey-producing plants of the various regions; sec-

ond, as to losses of bees by diseases in wintering; third, as to the races of bees now kept, and their relative proportions; fourth, as to the proportion of frame to box hives now in use; and fifth, as to honey production.

On the basis of the data obtained under the first head, that is regarding the honey-producing plants of the country, it is proposed to map on outline maps of the United States the areas of the principal honey-producing plants, and to determine where and what new plants can be disseminated for the purpose of increasing the pasturage of any given section.

There are still some points in the life-histories of insect enemies of honey bees that should receive attention and clear elucidation.

A card index of aparian literature is much needed in the office work to furnish ready reference to everything that has been written on a given topic.

Then, naturally, whatever results may be attained, or whatever information it is desired to make public, will have to be put in the form of bulletins, which will require care and time for their preparation.

In all of this work, whether experimental or office work, the Apicultural Investigator earnestly hopes for the hearty co-operation of the bee-keepers of the country, and is desirous of receiving from any who have in mind a subject of general interest whatever suggestions such persons may feel disposed to give, and all may rest assured that the most careful consideration will be given to any and all propositions of this nature which may be presented. In this connection the remark of the esteemed Doctor Riley must not be forgotten, but should be held as a prophetic warning, namely: 'that the reason that nothing more resulted from the work begun under his auspices in 1885 should, to some extent, be laid to the lack of effort on the part of the bee-

keepers themselves, that is, to their failure to be unanimous and hearty in their support of the work.'

A few words in closing in regard to the present Chief of the Bureau of Entomology, Dr. L. O. Howard. All of those who have the honor of being acquainted with this gentleman will join me, I am sure, in testifying to his high standing as a scientific investigator, as well as to the genial whole-souled nature of his personality. To those who have not met him I would say, that no man is more widely known among the galaxy of distinguished scientists whose homes are in the Capitol city, and in his line of work no man is more highly esteemed. His work in scientific and economic entomology, and his writings in this line have made him known in every country of the world where there is even the slightest appreciation of the labors of the scientific investigator of insect life. He is not a bee-keeper, but he has come in the course of the years during which we have been associated, to know something of the status of this industry and its needs, and I can assure the members of this organization, and through them the bee-keepers of the country, that he is in hearty sympathy, as was his predecessor, with progressive work in the line of investigation and development of the industry in every part of our country. With greater opportunities in the way of funds than were accorded to Dr. Riley, he is able to authorize more work, and it is due largely to his liberal spirit and his ready acceptance of my own recommendations in every particular, that the industry is now upon so substantial a footing at the Department, and that the outlook for continuous practical and scientific investigation in apiculture is now so excellent.

Washington, D. C., Sept. 24, 1904.

At 12:10 p. m. the Convention adjourned till 7 o'clock p. m.

SIXTH SESSION.

At 7 o'clock p. m. the President called the convention to order and called for discussion on Prof. Benton's paper.

Mr. Hershiser moved, seconded by Mr. Dadant, that the matter of taking such measures and steps as shall continue the governmental apiary in investigations in the interest of apiculture in the United States be referred to the committee on Legislation.

The President put the motion, which on a vote having been taken was declared carried.

The President left the chair, Mr. Dadant in the chair.

THE PRESIDENT: Mr. Chairman, ladies and gentlemen, we should not give a paper of this sort mere passing notice for the reason that Prof. Benton himself has done everything that the bee-keepers could ask of him in his official position. There are many things, if you will revolve it over in your mind's eye in that paper that are grand and good and in the best interests of the bee-keepers of America. For instance the matter of getting honey plants and scattering the seed throughout the several States that it may be beneficial to all of us who may be bee-keepers; another matter, that of establishing apiaries where they may experiment in the line of getting queens of the best sort, probably getting longer lived queens if possible. As we go along we get improvements in every line in life, as you see here at our door, and each and everyone of you should lend your encouragement and your help to the one who is foremost in this work. I know it was only last winter and the winter before through his efforts he has got appropriations. Now that he is going to assist not only the United States but other countries in the development of the bee industry. We should not pass lightly over these matters but look at them from a careful business standpoint and then after

we see we are right go to our representatives in Congress and in the Senate, because you all have influence—the most humble citizen in life has his influence—and by putting forth that influence in a few years we will get into a different channel from what we are at present and you will all be proud of the fact that you are members of this Association. We will not have to solicit members; they will come and solicit us to join. Up to this time you have had one of the most successful conventions in the history of the Association, and let it go to the world that such papers as have been presented here are doing a world of good for us; it is building up our industry; and let us each and everyone try to help one another and when we have done this we have done a good thing for the cause. (Applause.)

MR. ABBOTT: Mr. Chairman, I ventured to suggest a little change in a paper yesterday and I will venture to suggest a little change in another one. When a paper is written in an official capacity it ought to rise above everything of a personal character. It ought to overlook any personal preference that one might have. Now, I don't want to be misunderstood. There is only one Weekly Bee Journal published in the United States and I don't own any of it or have any interest in it, but it does as much to aid in building up bee keeping as any other one institution on the top of God's earth. It has done it under the present management and I believe it has done it under every management. Mr. Benton in his public paper does not recognize the existence of the American Bee Journal and I object to that part of the paper and think that he ought not to make reference to the other papers as to the great work they have done and absolutely ignore the grand old American Bee Journal. (Applause.)

MR. ROOT: There is one matter spoken of in that paper and that was

with reference to getting Senators and representatives to take hold of any matter connected with the Government. When you desire to get an appropriation one man cannot do it, one Bee Journal editor, nor two can do it, there has got to be pressure brought to bear from a good many sources and a good many bee-keepers. I remember when this last appropriation was up for consideration I was asked to write to our Senator at the time, and I did, but that didn't go very far. At that time I didn't have the means at my command to bring it to the notice of the bee-keepers in time to do any good and the result was that our Ohio Senators did nothing to help in this matter, but I have learned since attending this meeting that pressure was brought to bear on some the senators who did have influence and some work was done, and it was due to that influence that that appropriation was secured in order that we might secure larger benefit for our National work, and if we wish to enlarge the scope of our National work we ought to take hold of this thing and pull.

MR. TITOFF: Mr. President and gentlemen, I should like to say something to you but I cannot do it as well as I should like to because I am not so well acquainted with your language, as I come from a foreign country. I wish to tender to you my thanks for the attention you gave my paper. I was greatly interested in bee-keeping when I was in my own country. I had been reading all the literature I could find in Russia. I have read many articles in Russian which have been translated into that language from the English and I was very much interested in the reading about bee-keeping in America. Not only we in Russia but all people know that America is a great country. Americans have gone into every business. I became so much interested in bee-keeping in America that I wanted to come myself to see the

Americans. I thought about it more and more and I finally decided I would come to America and if possible take up practical work in the American apiaries and study American methods. When I left my home and my people I did not know one word of the English language. My Russian friends told me that it was very hard to learn English but I think with hard work I will be able to understand it sufficiently to earn a living in America. When I came to this country I went to the Root company, one of the largest businesses in America, where bee supplies are made; you can meet their manufactures anywhere in the world. Before I came here I was in Switzerland and I think many of you know Mr. Edward Bertrand. I had a letter of introduction to him from a friend at St. Petersburg and Mr. Bertrand is acquainted with Mr. Dadant, whose name is well known in Russia, and he gave me a letter of introduction to Mr. Dadant and the Root company. I first came to the Root company and I received from them a very kind welcome and they said they would give me work and I would improve in the English language, for which I thanked them very much.

I have the honor to be the representative of the Russian bee-keepers in the convention here. It will give me great pleasure to write to the Russian journals to give them information as to the methods of bee-keeping in America and to tell them that I have received at the hands of the American bee-keepers very great kindness. In my paper which was read at this convention I thought it would be interesting to American bee-keepers to know about the industry in Russia. The paper is not as good as I could wish but I hope you will excuse me for taking up so much of your time in the reading of it. I thank you very much for your attention. (Applause.)

At this stage Mr. S. Francis of Erie,

Col., favored the convention with an instrumental solo which was received with applause.

MR. HUTCHINSON: As chairman of the committee on resolutions I beg to report that we have commenced to make poets in our ranks and it seems that one has cropped up down in Alabama who has gotten out a little volume as a souvenir edition and has made a nice greeting for the Association in the forepart and he asks the privilege of presenting each one of the members with a copy, and your committee would recommend they be accepted with the heartiest of thanks.

Mr. Miller moved, seconded by Mr. Hyde, that the report on this souvenir be received and adopted.

The President put the motion which on a rising vote having been taken was declared unanimously.

MR. HUTCHINSON: We have a resolution moved by Mr. Dadant that this convention assert that no artificial comb honey has ever been or can be produced; that the only successful adulteration ever made has been of liquid honey out of the comb.

The committee believes enough committees have been appointed upon this subject and that enough has been said to cover this ground and we would recommend that it be not accepted,

We have also a resolution here from Dr. Bohrer upon the appointment of two persons from each State and the Dominion of Canada who shall organize themselves into a legislative committee. This resolution has already appeared in a previous part of the minutes and your committee recommend the adoption of the resolution.

Mr. Pressler moved, seconded by Mr. Hyde, that the resolution be adopted.

The President put the motion, which on a vote having been taken, was declared carried.

CAUCASIAN BEES.

Question: Has any member had any experience with pure Caucasian bees, and if so what are their qualities ?

PROF. BENTON: Something more than twenty years ago my attention was called to those bees in Germany; they had been imported there from the Caucasus. There were such varying reports concerning them that I was not very much inclined to test them at that time, especially as I had my hands full with other races of bees, and furthermore those I saw were not very uniform in their markings. The Germans said of them, I think nearly all, that the bees were extremely doubtful; some said they were quite worthless as honey gatherers, others told about their great disposition to swarm and so on, and all that disinclined me to take them up. About two years ago I was out at the apiary of Rauchfuss Brothers near Denver, and they spoke very highly of these bees. They had received some that came directly from the Caucasus. I was led to undertake to get some bees and have been testing them. I find them good honey gatherers; they are as I noticed in Germany rather varying in their markings; they look something like Carniolans that have been dipped in water and then dried, giving them a leaden tinged appearance, yet they are easily distinguished, their bodies are smaller than those of the Cyprian and so tractable that anything one desires to do with bees can be done with them without smoke, without any bee veil, at any time, early or late, whether getting honey or not; they can be brushed from the combs with the bare hand and you can hammer on the entrance and brush the bees from the entrance and do anything with them, no matter if the propolis snaps, no matter if the time of day is undesirable and you have no bees flying after you in the apiary or about your face; they fly through the air in large circles and

return; they do not sting. They can be made to sting by pinching. If you bother them in the fall when wet or cold they might occasionally sting you. I have never had any occasion to use any smoke on them at all. Exactly how they are going to compare with other bees as regards their productivity I am not quite able to say. I should like to hear Mr. Titoff tell us as to them. Some people here find they are great swarmers perhaps but that results from being so prolific, they must be kept in larger hives that will give them room to expand and build up.

MR. TITOFF: What Mr. Benton says about those bees is true. I have had my own experience and I find that the Caucasian bees are better than our common Russian bees. They work early in the morning and late at night; they are very gentle and not cross at all. You can go among them without either veil or smoke. They have only one fault and that is swarming. It is very hard to keep them from that. They make plenty of queen cells. If you take away the queen cells today, tomorrow they will make twenty or thirty more. Some people say the Caucasian bees produce honey that is different from that of the common bees.

MR. KRETCHMER (Iowa): While travelling through Germany last year I encountered two apiarists who had Caucasian bees. They were represented to me as stingless bees; they were in Berlepsch hives; they stung me twice. They were swarming entirely too much, they informed me, which was perhaps due to the smallness of the Berlepsch hives. They had not proven to be profitable. They said they were not gathering as much honey as the Carniolan. The Carniolan predominates in the greater part of Germany although some very nice Italian bees can be found. The parties who owned these bees did not seem to be very favorably impressed with them.

One party said he would not continue them another year unless they proved better than he anticipated.

MR. TITOFF: They will rob worse than other bees.

PROF. BENTON: That has not been my experience. I have not had a large number of the pure cult but I have not seen that those pure bees were endeavoring to rob and I had them among other colonies and I would have noted it at once. I have quite a number of Caucasian queens bred to Carniolan and Cyprian drones and I formed a very favorable opinion of those crosses and I am disposed to think that Caucasian males will be most excellent as crossing material with the Cyprian bees to modify the temper of the Cyprian and still retain the excellent working qualities. One reason is that the type is much nearer that of the Cyprian, therefore I think they will coalesce more readily. I do not believe such a race of bees would serve my purpose but I do believe in this country where so many bees are kept in the cities and public highways that such a valuable and fairly productive race would have its place and would make bee-keeping popular, and many of the difficulties in connection with people coming to this Society and complaining that their neighbors are interfering with their keeping bees would be done away with in a great measure.

MR. MILLER: Prof. Benton, you know that the cross of the Italian with the common black bee results in making the progeny crosser than either one. In case of crosses with these Caucasian bees are the crosses in all cases gentler than the blacks or Italians?

PROF. BENTON: Yes. I have been crossing Cyprians and Carniolans for the past nineteen years, various crosses starting sometimes with the Cyprian and breeding to the Carniolan drone and sometimes with the Carniolan and breeding to the Cyprian drone or the Syrians, and I have crossed

them back again and it is invariably my experience that the male had the main influence in both the temper and constitution of the worker progeny. I have taken a pure Cyprian and mated it with the Carniolan and I have bees that are much gentler than the Cyprian. The fact that the Caucasians are gentler and are a fine type to coalesce inclines me to believe if we used the Caucasian males we would have better crossing material to use upon the Cyprian than if we used the Carniolan.

MR. MUTH (Ohio) I would like to know whether the Caucasian bees swarm more than the Carniolan.

PROF. BENTON: I can't say. I hardly believe they would under the same circumstances.

MR. HYDE: I would like to know how they cap honey and if they are good comb builders.

PROF. BENTON: They are good comb builders and cap their honey fairly white. People have told me that they were good workers, good gatherers and storers of white honey, but would not work on buckwheat. I cannot believe that if they would work well in early spring that they would not be in condition to store buckwheat honey.

MR. TITOFF: I know nothing about crossing bees with the Carniolan or Cyprian, but some of the Russian bee-keepers have crossed. Caucasian bees with Russian black bees and they have found that the progeny is more like the pure black or pure Caucasian bees.

I cannot answer Mr. Muth's question because I have not had the experience. I think those who have had experience say that the Caucasian bees are greater swarmers than others.

MR. KRETCHMER (Iowa): Permit me to ask Prof. Benton with regard to the crossing. Isn't it a fact that an Italian queen or a Carniolan queen crossed with a Cyprian drone produces

crosser bees than if the reverse were the fact?

PROF. BENTON: Certainly. In my experience the Cyprians are the greatest gatherers of honey of any race that I know of but there are some exceptions to that. If the Cyprian is mated with the Carniolan drone they are more likely still to get more honey than if purely mated, for the simple reason that the constitution is made hardy and the bees do not dwindle in the spring; they have the tongue-length and energy of the Cyprians with the hardy constitution of the Carniolans.

MR. WHITCOMB: For the last twenty years I have been superintendent of the honey show at the Nebraska State Fair and every single first premium that has been awarded on comb honey has been on honey put up hybrid bees.

PROF. BENTON: It has been my idea that we should place these Caucasian queens at the State Experimental Station and a few of them in the hands of skillful breeders in different parts of the country where they might be multiplied and put upon the market.

In answer to one of the members I would say, pick out the gentle bees for honey.

QUESTION BOX.

QUESTION: On ten-frame Langstroth hives shall I use an excluder, not being on the ground in swarming time, for extracted honey?

MR. HYDE: I would answer no.

MR. ANDREWS: We found in several hundred colonies we put on excluders and it increased the swarming from 50 to 75 per cent. for extracted honey.

MR. HOLOCAMP (Mo). Did the gentleman give plenty of ventilation under the hive?

MR. ANDREWS: No.

QUESTION: How can you hold a swarm of bees when you select the bee tree?

MR. DADANT: I believe I understand what the gentleman means by the question. He thinks after a swarm has selected a tree that you will not be able to hive it because it will go to that tree. I know that a swarm can select a bee tree and still be hived and abandon the idea of that bee tree.

We had near our apiary a tree with a hole in it and I saw bees at the hole cleaning it out and I said there was a swarm in that tree, and there was a swarm out at the apiary and I hived those and never saw bees at the tree afterwards.

MR. ANDREWS: Did you put brood in that hive?

MR. DADANT: No Sir.

MR. HALL (Iowa): I have had a number of experiences the same as that of Mr. Dadant and I am satisfied that they can be collected afterwards if they have a place to go. You can change them from where they have already gone to another place and they will, as a rule, stay where you put them. Under some circumstances they won't at all but they generally will.

MR. REINECKE: My experience has been if you put a comb or two of unsealed brood in it holds them very well.

QUESTION: Can any one race of bees be improved by so called judicious selection?

PROF. BENTON: Yes, every race.

DR. BOHRER: If it has reference to the working qualities I don't know whether they can or not.

MR. DADANT: I believe we can improve their working qualities.

PROF. BENTON- It does not need to be a matter of belief; it has been done with every race.

QUESTION: How much more honey can be obtained by extracting before the honey is sealed than if the honey is left in the hives as it ought to be?

MR. FRANCE: I wish to issue a protest against this idea of extracting unripe honey.

MR. PUTNAM (Wis.): How did Mr. France get his honey sealed this year?

MR. FRANCE: I got it ripened though it took from the time they gathered it till today and it is in the hives yet and it is capped over and the hives are standing three stories high and they will stay there till spring and it will be good honey too.

QUESTION: How do you put the bottom starter in sections?

MR. ABBOTT: The way you put the top one in.

DR. MILLER: Put it in the same way you put in the top one; put in the bottom one first.

MR. HALL: I am quite satisfied that I have a better way than Dr. Miller has. I have a G. B. Lewis foundation fastener. I don't see why any other machine that has a hot plate could not be adjusted to work the same as the Lewis machine. The Lewis machine is reversible. You can adjust it to put in the starter in three-inch sections or four and a quarter. I take that plate out of the machine to the grinding stone and grind it till it had a sharp cutting edge on each side, not that the edge is intended to cut but in order when you come to let it pass through the foundation it will pass through as leisurely as possible. In the next place I take the base box off which is just below where the hot plate is. I let that down just enough to make a little more room between the bottom of the section where it is in the machine and where the hot plate comes out. I let that down just as much as I want the bottom starter to be in the hive. Then I cut a couple of finger-ways out of the head block. Sometimes the foundation is inclined to fall away from you when you want to take the section from the machine and by having the finger way you can put your finger around and touch it slightly and that will hold it from tumbling away from you. You have got the machine all ready for work. You put the sec-

tion into the machine put in the foundation just as if you were going to have a foundation in without any box starter at all. After it is stuck then insert the hot plate again and that sharp edge will pass through the foundation so easily that you will wonder how it is done. That will leave your bottom starter standing there. All you have to do is to pull your section off again and turn it end for end and put it back again and put the balance in there for the top starter and your work is done. Those of you who have not got Gleanings which tells about it had better get it because it will be more valuable to you than the mere cost of it.

DR. MILLER: I believe I was the first one that started the bottom starter. One of the advantages of the bottom starter is that you are sure that the bottom of your starter will be in the middle. Another reason is that you are sure your section will be fastened to the bottom. In many cases if the honey is not coming in plentifully, especially towards the close of the season, a section will have a passage way under it, and that bottom starter prevents everything of that kind. In other words, that bottom starter gives you a section fastened in all round. Before I had bottom starters, very often I had the starter swing clear off and fasten on to the separator and it took me three or four years to find out why. I hadn't sense enough to know it was that bottom starter that held it there and didn't allow it to swing over the side.

MR. JOHNSON (Ill.): Do you save any foundation?

DR. MILLER: No saving of foundation at all.

MR. JOHNSON: Do you make the two ends meet?

DR. MILLER: No, there is a space of one-eighth to a quarter of an inch between the two starters and one of the first things the bees do is to fasten them together. If you put the founda-

tion down near enough to the bottom so that it is fastened to the bottom it is sure to bulge to one side, and by cutting out enough to put two pieces in, the bees will make it fast at the top and bottom without any bulge on bend.

DR. BOHRER: How wide do you make the bottom piece?

DR. MILLER: Five-eights of an inch.

MR. GILL (Col.): In answering the question, "Can you save any foundation?" I think you can by using a bottom starter. You can secure very good combs by using a half-inch or five-eighths starter at the bottom, about an inch above, because frequently the bees will commence on that bottom and go up to the center. If a person wants to save foundation he can do it by using the bottom foundation because the bees will fasten those places together where they meet.

MR. MILLER: The question asked me was, do I save any foundation? I say I don't. You can if you want to.

PROF. BENTON: As a matter of fact you really lose by the amount that it takes to fasten the bottom starter.

MR. GILL (Col.): You can secure combs fastened well at the bottom by putting on the starter and pulling it right off again, leaving one half row of foundation cells there and invert it.

MR. HERSHISER: Dr. Miller as I understand says he does not make both ends meet. I thought he had been a successful bee-keeper. (Laughter.)

MR. DADANT: Mr. Coppin, of Winona, Ill., has a way of putting in a full sheet of foundation which does away with the trouble the gentleman mentioned in regard to foundation sagging or leaving a space at the bottom. He splits the section in two in the center; he lays two sections side by side on the table or four halves and lays a sheet of foundation upon them and puts the other four halves on top and fastens them together. That gives a full

sheet fastened on all four sides. I never saw such honey as that presented by Mr. Coppin, it was so regular.

PROF. BENTON: That practice has been followed in England for many years.

DR. MILLER: These is one objection to that and that is that the outside of the section shows the split and it is not so good looking a section.

MR. ROOT: The method is English now, if I may judge by the kind of sections the section maker is making, is very similar to the one described only that the section has a groove cut almost through lengthwise and the foundation is dropped in between the grooves and the dovetail fastened together. We are selling annually hundreds of thousands of them to the British trade. We don't sell any of them in this country. I know our bee-keepers in this country would not bother with anything of that kind.

DR. MILLER: As a matter of curiosity will you allow me to say when Mr. Root was so small he didn't know anything about sections we had the same thing in this country. They were made with that groove in the top bar and the top bar was laid down so as to crack that open and then straightened up. That is the first kind of sections we had in this country and they were a big nuisance.

MR. ROOT: It was a square groove and slot around the section.

MR. SAMPSON (W. Va.): This is my plan if you could see it for cutting the foundation in the section. I fasten the points together in the center and I have very good results. The sections are always well filled and I never have any trouble.

MR. HALL (Iowa): I have tried in a small way by doing the same thing Mr. Root speaks about. Take twenty or thirty sections and place them together and rip them three quarters of the way through the section from end to end leaving the bottom part of the

section under it and putting them together, leaving that groove, but, as he said, they were a regular nuisance. I can put in 2000 sections the way I do it.

DR. BOHRER: A great many bee-keepprs ask me as to what I regard as the best plan of fastening comb foundation in shallow extracting frames. The grooves in most of the frames sent out are very shallow; and there is a wedge that the companies use. What is the best method of fastening comb foundation in shallow frames?

MR. HALL: Get a common machine oil can, one that has a good deal of spring in the bottom, put a short snout on it or cut the one off that is all ready on it. Then have a frame to put your extracting frame into so that there will be a little board to just fit the inside of the frame that will come just half way up or half the depth of the frame, right up to the edge of the groove. You must keep that can filled with a mixture of beeswax and I put a slight bit of rosin in it to make it a little harder. I put the frame on this other frame, slip the foundation into the little groove, take my little oil can which is sitting on the foundation fastener to keep it warm. You don't want it too hot because if it is it will melt the foundation, and if it is too cold it will freeze in the nozzle of the can. When you get the foundation into the little groove turn the frame up slightly so that the weight of the foundation will fall into the groove and stay there. Take your can and run down a little drop on the end of the foundation and right down to the bottom. Then tip it the other way and let it run back and cool, and then take it off, and thus continue until it is finished.

MR. ABBOTT: We have wedges in all our frames and don't need any oil can.

MR. MILLER: May I say that it is a matter of locality. Mr. Abbott is en-

tirely right; in proper localities there is nothing better than the wedge; I wouldn't want anything better than the ordinary wedge that is sent out, but other bee-keepers say they do not stay in.

The President appointed the following permanent press committee: J. M. Hambaugh, Cal.; H. H. Hyde, Texas; James A. Stone, Ill.; Frank Rauchfuss, Colo.; E. S. Lovesy, Utah; Prof. H. A. Surface, Penn.; O. L. Hershiser, N. Y.; J. C. Stewart, Mo.; Frank Benton, Wash., D. C.; E. Whitcomb, Neb.; E. Secor, Iowa; Dr. G. Bohrer, Kansas; F. W. Muth, O., and J. J. Crosby, Ind.

The President called for the report of the committee on honey organization.

Mr. Pressler presented the report as follows: We the committee appointed to name the first five directors to form the National Honey Producers' Association beg to report as follows: Fred. E. Brown, Cal., chairman; N. E. France, Wis.; J. U. Harris, Col.; W. L. Coggshall, N. Y., and H. S. Ferry, N. Y.

Signed,

F. E. BROWN,
H. S. FERRY,
E. E. PRESSLER,
J. Q. SMITH,
E. S. LOVESY.

On motion of Mr. Thompson, Wis., seconded by Mr. Krebs the report was adopted.

Question: Shall we produce comb or extracted honey?

MR. DADANT: Yes, both.

Question: Give your experience with Holy Land bees?

MR. LAWS: I think this race of bees has been reported as being very cross. I have not found them that way. By judicious treatment they are not so. I think I could find a good many bee-keepers in this audience who will say they are a very quiet race of bees, and they are fine honey gatherers. They are reported as heavy swarmers. If

you give them room enough they will not. The remarks as to the Caucasian bees will very well apply to the Holy Land bees with reference to swarming. I find the objection that has been raised to the Holy Land race of bees has been raised also against the Cyprian bees, and I think those persons who have raised those objections are persons who have not been acquainted with the Holy Land bees. They are fine breeders and they do not breed out of season. In raising comb honey they cap their honey a dark watery color. They use the least amount of wax of any bee I have seen in the manufacture of their comb. I can pick out a comb of honey that has been built by the Holy Land bees, the capping being so thin and the wax so brittle that it will leave the honey.

PROF. BENTON: I would like to ask the gentleman what he calls Holy Land bees? Where do they come from?

MR. LAWS: My importation came about ten years ago from the city of Jerusalem. Since that time there has been another importation. Although I raised 115 daughters from that queen I had to discard her. They came from a sister of Mr. Baldwin's.

PROF. BENTON: In regard to the Holy Land bees, it may be remembered that I went to Palestine and Syria, in the year 1880 and remained in that part of the world for several years and I handled a great many bees in Palestine, and I brought those bees to Germany and also to this country. I pointed out in my work in connection with those bees the fact that southward from Mount Carmel the bees are quite different from those north; and the term Holy Land was invented by Mr. D. A. Jones because he thought it would sell the bees and under the term Holy Land he grouped these two types that are very different, so different they deserve to be called separate races. The first bees that were sold under that name were really hybrid

bees, crosses between Syrians and Palestine bees, I insisted upon calling those southward from Mount Carmel the Palestine race and those northward the Syrian race.

Confining myself strictly to the race of bees of Palestine I want to speak of some of their qualities which as a race they possess. They are good industrious bees in a northern climate; they breed out of season and when deprived of their queens are very prone to have fertile workers within a very short period, oftentimes before they have time to raise a young queen, and will get all the worker comb stuck up' with brood which is very objectionable. They raise a vast number of queen cells; I don't know that that in itself is very objectionable, but it inclines one to believe they would swarm very freely, but I think that can be largely overcome. I have found them bad tempered all in all, and I prefer to handle pure Cyprian bees to pure Holy Land bees. I have gone on the Island of Cyprus without a bee veil, or when I had to use a bee veil, with very little smoke, and I wouldn't attempt to handle either Syrians or Holy Land bees in that way; I couldn't get along with them nearly as well as Cyprians.

The bees of Palestine are more nearly like the Egyptians than the Syrians.

QUESTION: Are baby nuclei advisable for the ordinary honey producer? Should baby nuclei have brood given them or not?

DR. BOHRER: In starting up the colony I always put in brood and I never have very much difficulty. Give them a well matured queen cell and they will probably hatch in three or four days and I never had them leave the boxes, or very seldom; if they did they would generally cluster and I would put them back. I got the idea from Mr. Langstroth in the summer of 1864. He had a number of nuclei at that time. These queen cells were fin-

ished up in large colonies and then transferred to these nuclei swarms,

MR. GILL, (Colo.): Let the honey producer buy his queens.

PROF. BENTON: I would suggest the honey producers learn how to raise good queens and raise them well. I believe he should avoid the small nuclei entirely. Give them brood and make them pretty good size.

DR. MILLER: Does Mr. Gill buy his queens instead of raising them himself?

MR. GILL: I buy all the queens I can't raise from natural cells. Those that are produced under swarming impulse I use all I can of and if I need any queens out of season or any other time I buy them. I produce honey and I always want a laying queen under every super, and if I haven't got one I buy one.

DR. MILLER: He said that the ordinary honey producer should not use certain nuclei because he should buy his queens. I want to know whether he buys more queens than he raises himself.

MR. GILL: That is pretty hard to tell. I bought more queens this year than I made increase. I use all the best selected stock I can from natural cells that are built under the swarming impulse at the swarming season and what I can't use I throw away. At any other time of the year if I want a good queen I get one from a man whom I know raises good ones. My bees are being worked for comb honey and I have no time to raise them. I bought last year nearly 300 queens and this year 200. I think a good queen will pay for itself in ten days in a good colony of bees in raising comb honey. I don't aim to make much increase because I am working for comb honey and I want big swarms and I don't want any queenless bees. I have orders for queens all the time I use them that way. If you need a queen

it is better to buy than to rear; you can't get along without her.

DR. MILLER: In the first place, as to buying queens in certain times of the year, instead of raising them myself, I don't believe that a queen breeder can tell better than Bro. Gill what kind of queen is good for the work. I believe if he will breed from his best honey producing queens he will get a better queen than he will get from the average queen breeders.

MR. GILL: I don't buy from the average breeder, I buy from the best.

MR. REINECKE (Kan.): My experience has been that it does not do a queen any good to come through the mails. I have had queens from different breeders, and good ones, and I have found some that were no good, and their daughters were excellent, so it shows that it may have hurt them.

MR. GILL: I must get up in defense of the queen breeder; that he can and does send a good queen through the mail, because mine come through the mail and I buy just as good ones as I raise. I am not prepared in the spring and I am not prepared in August and I am not prepared with my cells at that time and my bees do not furnish them and I buy them and I just get as good queens as I can rear. I bought 200 queens last year from a man who took them out of his full colonies in the breeding season and there were no better queens in the United States, but they occasioned me \$200 damage and I have only two of them left.

MR. ROOT: I would like to answer part of both questions. In regard to these baby nuclei for the average honey producer. With the state of knowledge about baby nuclei now I do not know that the average honey producer had better tool very much with them. The first and second years we tried them we did not make them work; but the third year we did. I think what we have done others can do. I

told Dr. Miller in answer to a question that he must have brood to make them work, but I have found out they work without as well as with. When we come to know more about these little nuclei I believe friend Gill can rear queens, as a matter of economy. I don't say they are any better. It is hard to say whether those little boxes about 3x4 scattered all around the yard, with just a few bees flying about, will be any good, but they will defend themselves and those queens will be hatched out there and will be just as good as any other queens.

Mr. Gill mentioned one important thing and that was taking queens out of a strong colony in the height of their egg laying and sending them through the mails, that it was a bad thing to do. We take these baby nuclei, and we put perforated zinc over the entrance and we send them out and there does not seem to be any bad effects coming from it.

In regard to the question of whether a man should rear his own queens or buy them I think it varies a good deal according to the conditions. Some seasons of the year it is better to buy them; there are some seasons of the year that the queens do not suffer in the mails.

MR. LAWS (Tex.): I want to answer both sections of that question in the affirmative. I think it is profitable for the honey producer to raise queens with the baby nuclei; it is the ideal thing; the great trouble is tearing up the full colony. I went into the apiary a little while back and I got there just in time to find virgins hatching out; in fact they have been held back in the cells by the bees, there were eighteen hatched out, we had some of those little babies and I rushed to the hive and we got those virgins and put them in those boxes as fast as they would come out. We put those nuclei in the shade, and after awhile carried them out to a new location and I got about

all those queens in. A man is not prepared for queen raising with large boxes. If he has large boxes it is a great deal of trouble to carry them around, to get the nuclei home and to stay after he puts them there. With the small boxes he can put them in the shade, and he can take them and scatter them around in the brush anywhere, and after they remain with the queen for awhile they behave like a newly hived swarm. As Mr. Root says, one or two bees at the entrance will guard the hive just about as well as a large swarm and you will find the queens mated shortly afterwards. I have mated 150 queens with the bees of one hive. You will have your cells built by a populous colony and you can get the queens all reared at the beginning of the season. We want no brood in those nuclei frames. I state this because I have had considerable experience. I think when we get a little more light on the subject you will think as I do.

MR. GILL: It is not proper perhaps at this time to state why it would not be practicable with me, but when it comes under the head of swarming or shook swarms then I might explain it. Only I shall say this, that the field we operate, with three of us to work with a thousand swarms, is about eight miles wide and twenty miles long and we see an apiary today and then we don't see it again for six days so that it would not be practicable for me. Under the heading of increase I will tell why I buy my queens at certain times.

PROF. BENTON: I remember getting a colony of Syrian bees from D. A. Jones, of Canada, and I was transferring them from one of their bee hives, which is a crock or water jar, we broke it and cut the combs out and transferred them into frames and in doing this we found they had cast a swarm and were ready to cast a second and in every handful of bees I took

out I would find four or five queens. I counted 250 well developed queens that I took out of this colony. The question was what should I do with them? I made baby nuclei. I got these queens mated in those baby nuclei. That was very well as far as it went. That was the spring of the year. We could take those queens and send them away and did do so. If we attempted to supply a queen cell to that nucleus there was all sorts of trouble. My proposition is this, in the long run it would not be profitable. Self sustaining nuclei that can be fed and bees added to if necessary are valuable nuclei in the long run; they are miniature colonies. They are not for queen rearing but queen mating, and having them ready as reserve queens. Those in the long run are more profitable.

MR. WEBER: I commenced it and I found I had perfect success until the robbing time came and then came the trouble; I couldn't keep the robbers away and particularly this year. I heard from a party in Texas who had made the same complaint.

DR. MILLER: I would like to ask this question, if one or two hundred queens be mated with the bees of one colony, if they should all go to the dogs afterwards where is the difference?

PROF. BENTON: You want one or two hundred more and you have trouble to establish all these colonies which is no small amount of work.

MR. LAWS: Mr. Benton relates that when he pulled out each handful of bees he would find four or five queens and in the first place he couldn't hold them because they didn't have feed there. In the next place I believe some one raised the objection that they could not hold these bees without honey; that is right they have to have feed. If you take a frame eight or ten inches by four or five inches and you have one hundred bees it will last those bees for six months and they

will increase and keep up their strength to a certain extent in those little boxes.

MR. ROOT: This question of robbing I find can be taken care of entirely by feeding out doors. It keeps all the colonies good natured. I didn't believe it practicable to feed out doors until some one reported it was and then we began doing it. We fed slowly several gallons a day. We fed those baby nuclei. That removes one of the objections. Those baby nuclei run out and they seem to get a little contrary but by continuous feeding this will be overcome.

On motion of Mr. Abbott the convention adjourned to meet Friday September 30th, at 9 o'clock a. m.

SEVENTH SESSION.

Friday September 30th 9 o'clock a. m. the President called the Convention to order, after which Mr. Laws of Texas invoked the Divine blessing.

MR. GILL: We have been very profuse in our thanks for everything that has been done for us. I know I was on a little committee and we were thanked, but I believe that the officers of the National have not been thanked, and before I sit down I am going to move that all the officers of the National Association be thanked for their efficient services in discharging their duties. There is one National officer who cannot live on votes of thanks and the laborer should be worthy of his hire, and he surely is, and that is the General Manager, and I move that the Board of Directors be instructed to devise some means to pay the General Manager amply for his splendid work.

MR. HOLEKAMP: I second that.

Mr. Gill put the motion which on a vote having been taken was declared carried.

Mr. Laws moved, seconded by Mr. Holekamp, that a vote of thanks be extended to those who had presented papers before the convention, and also those who had in any way contributed

to the entertainment of the members present.

The President put the motion which on a vote having been taken, was declared carried.

Mr. Stewart moved, seconded by Mr. Laws, that a vote of thanks be extended to the managers of the Christian Endeavor hotel who had placed the use of the Auditorium at the disposal of the convention.

The President put the motion, which on a vote having been taken was declared carried.

THE PRESIDENT: Ladies and gentlemen, at this time I wish to introduce to you Mr. Adams, Mr. F. W. Hall and his little daughter Miss Annetta Hall. Mr. Adams himself has put forth a great deal of labor in getting up this little souvenir termed "Honey Fairies." We should in this life be mindful of our duties and let nothing escape us that would reward them for what they have done for the bee-keepers' convention and Mr. Adams will in his own way read to you this introductory greeting, and then Mr. Hall and his little girl will give each member one of these souvenirs so that you may take it home with you. I understand it has cost Mr. Adams considerable to get up this little souvenir and I know when you take it to your homes you will appreciate his kind work in your interests.

MR. ADAMS: Ladies and gentlemen, I have heard several say this was the greatest National convention that had ever convened. I have heard very many say that this was the largest fair that had been held in this world. These two events have come together. We look at them together today. In anticipation of this—I knew it would be so—I thought it was fitting we should have something that would bring the two together and make, as we sometimes use the word, an emulsion, and run them together. This is one of the great events in our lives and a mile

post we will look back to as long as we live and which we will never forget. You will find my thoughts better set forth in the verses that I hope I may be able to make you hear.

GREETING.

To our Bee-keeper Brothers,
Wives, Daughters, and Others,
Who love the Bee, Honey and Flower—
Who hither have rambled—
In council assembled,
To meet and to greet for an hour.

Life's greatest events we remember,
Like mile-posts, they stand in Life's way.
Some fierce as the storm of December;
Some, gentle as zephyr in May.

Some stand in the snows of Winter,
Some wreathed in the roses of June;
Some, framed in the darkness of midnight;
Some, paneled in sunbeams of Noon.

But whether at Noon or at Midnight,
Or standing in Sunset or Dawn
In alto relieveo, the picture
That Memory, the limner, has drawn.

What "Greatest Event" can be rarer—
Of all that now mark our life-way,
What mile-post, I ask, can be fairer
Than one we may build here today?

Yes, in this great Pandect of grandeur,
All eyes that have seen are agreed,
The World has outdone herself grandly—
Has broken her record indeed!

And we, who will not see another,
May rest with the comforting thought,
That we saw the greatest collection,
That ever together was brought.

Our eyes are bewildered with beauty,
Our ears are entranced with sweet song,
Too sweet and too fair for plain mortals,
In land of our dreams they belong.

Not even the Arab Dreamer
Could ever build castles like these
Or rend all the Rainbows in fragments.
To scatter and swarm, like the bees,
To make iridescent, the fountains,
Bedazzle the landscape, like flowers,
Bespangle and light the glass mountains,
To sparkle, like meteor showers.

The fairest of all that is fair,
The World has lain down at our feet!
The rarest of all that is rare
Is ours while we meet here to greet!

The grandest results of the ages—
The brightest from Earth, Sea, and Sky—
We'll place them all here in a mile-post—
A pillar, all time to defy!

How goodly the Hills for foundation—
These hills where the Places stand!
Befitting—this site and location—
For something colossal and grand.

Ideal—these castles of beauty,
We'll use them—the large and the small.
Each glittering dome shall do duty
In building which never can fall.

We'll place here our richest mosaics,
Like jewels, engraved and embossed.
They cannot be dimed by the Ages—
They cannot be crumbled by Frost.

We'll scatter the fragments of Rainbow
Where they will be always in sight,
The pinnacle, piercing the Halo.
That crowns our vast pillar with light!

A pillar so grand in conception
Was never erected before,
Yet this is our memory mile-post—
In view from Eternity's shore.

Some gems we must find, to take with us—
The clasp of your hand and your smile,
And other sweet tokens of friendship,
The lonelier hours to beguile.

Time hastens—and bears us right onward,
Relentless, and heartless, and strong,
We'll try to hold fast, all the lovely
And carry the beauties along.

That when, at the noontide or glooming,
We pause for a moment to rest,
We'll open our casket of jewels,
And find here the brightest and best.

And in the soft light of the Halo,
That falls from our Memory-pile,
We'll rest and look over our treasures,
And count all our gems, with a smile.

RAREWELL.

* * This we speak with reluctance,
We wake from our dream with a start!
Time knocks at the door. Can we stay
him?

One clasp of the hand, and we part.

When Starlight and Silence falls o'er us—

GOODNIGHT.

* * Though we part, may we meet
Where Beauty and Love dwell forever,
Sweet Hope! May we, there,
MEET AND GREET.

The President then called for a song from Mr. and Mrs. York, to which Mr. and Mrs. York responded by singing "The Wheat and the Tares" which he explained had been written by a convict in a pententiary.

At Dr. Miller's request Mr. and Mrs. York also sang a sacred selection entitled "Jesus and Shall It Ever Be."

On motion of Dr. Miller, duly seconded, a hearty vote of thanks was tendered to Mr. Adams, to Mr. Hall and his daughter in connection with the presentation of the souvenirs to the convention.

THE PRESIDENT: I wish to say at this time before we proceed with the business that no one unless they have occupied the position of chairman of a National organization of this kind knows of the duties that are put upon his shoulders; and we all make mis-

takes as chairman; if I have made any I ask forgiveness; it is the fault of the head, not the heart. If there is anyone here who has been slighted I want to know it. I have tried to preside in a fair and just manner and I have tried to recognize and see that all were properly put before this convention in the right light. I thank you. (Applause.)

MR. LOVESY: I would like to say a word on the organization question. Contemplate the vast multitude of bee-keepers and then consider the little organization that we have. We have not sufficient organization to reap or receive the benefits we might otherwise get. Consider the aid and support we might get from the State experimental Stations and the Government which we cannot now use because we are not united and not organized so that we can take advantage of those things. There are many things in the United States we could get if we were organized but which we cannot get without organization.

MR. GILL (Col.): We have had perhaps enough talk about organization but I wish to say a few words. I think it was Mark Twain who said: "You don't get anything in this world without asking for it and then you insist on it." In Colorado we have secured the passage of a number of bills with reference to spraying and other matters such as Pure Honey law; we have insisted on these things. They can be obtained but it is necessary to first have merit. Human nature is much the same the world over. If you have something with merit in it they will take hold of it irrespective of politics.

The President called upon Mr. C. Stewart to present a paper on foul brood.

MR. STEWART: Your general manager asked me to give you a paper on black brood. Perhaps I should say here that according to our New York

State authorities black brood is considered a type of foul brood and we call it by the name of black foul brood now to make a distinction from the old or malignant foul brood.

BLACK BROOD.

Black foul brood first made its appearance in New York State in Schoharie county, among bees brought from a Southern State, and was at first confined to a small area, but soon alarmed apiarists by the great mortality it caused among bees as well as the rapidity with which it spread.

As a rule, the germ of disease affects the larvae before it is capped and causes it to have more of a yellow cast than it usually has in a healthy state, causing an unusual motion as if in distress. Later it dies and sinks in a shapeless mass in the bottom of the cell, assuming the color of coffee with a little milk added. It now gives off a sour disagreeable smell quite different from the glue pot smell of ordinary foul brood, and unlike foul brood refuses to be drawn out in a rubber-like string.

The bees seem to recognize the diseased cells and do not cap them, so that a very large percentage of the brood capped hatches, although an occasional depressed or perforated capping similar to foul brood may be found. The dead larvae may readily be removed from the cell after it has dried, differing again from foul which attaches itself so closely to the cell.

The effect of this disease varies greatly in different apiaries, as well as in its effect on individual colonies in the same apiary. This was hard to explain at first until we learned that it proved most destructive in those colonies weakest in vitality. Further research proved that the average vitality was much lower in some apiaries and hence succumbed more readily. Just as a man is more susceptible to disease whose vitality is impaired by over work, improper nourishment, exposure or from various causes.

A dearth of honey causes the bees to either over work, or else suffer from lack of nourishment, thus impairing their vitality, and so succumb more readily to disease. To have disease, the germ of that particular disease must in some way be carried to the hive. How the germs were carried from a diseased apiary to a healthy one four or five miles distance puzzled me greatly until I proved beyond the possibility of a doubt that bees from those diseased apiaries could be found in apiaries at least four miles distant thus carrying the disease with them. Such being the case with apiaries, how much greater is the mixture of bees from hive to hive in the same apiary. This can best be illustrated by citing the fact that in an apiary with but one badly diseased colony, the colonies on either side of it in the same row will be found diseased, diminishing gradually in the amount of affected brood as we increase the distance from the source of contagion. This also seems to hold good in regard to the hives in the rows both before and behind the badly diseased colony but to a very much lesser extent. Black foul brood spreads more rapidly where the hives are close together. The same of course holds good with the spread of disease from yard to yard.

In this paper I have already foreshadowed a method of treatment as follows:

Have apiaries isolated as much as possible.

Do not set colonies too close together.

Keep all stocks strong by having young vigorous queens rich in vitality. Introduce new blood generously each season, especially that with a dash of Cyprian blood in it.

Shake all diseased colonies on clean frames of comb foundation as soon as discovered and feed a little sugar syrup for a week to restore their vitality.

If feasible establish a hospital apiary in some isolated place for the treatment of diseased colonies from not only your

own but also your neighbors apiaries, moving them at night and treating all at one time and moving home when cured to give place for a new lot.

By following the foregoing method of treatment with all of its minor details, which cannot here be given, together with a helpful enforcement of a wise foul brood law, a new order of bee-keeping has been brought about in Eastern New York. The box hive man and the slovenly bee-keeper with his scrub hives and methods has given place to a bright clean class of bee-keepers who have a conscious power to succeed even in the face of disease.

This paper, which has been written as I have traveled from apiary to apiary, I feel would be incomplete did I not pay a tribute to those who framed our foul brood law as well as to the Department of Agriculture who have made strenuous efforts to carry it out. The bee-keepers of New York State owe much to the wisdom of this law, for where once disease blasted men's hopes and threatened even the loss of their homes with a legacy of empty hives, has arisen fine apiaries where men proudly exhibit their tons of honey.

MR. KOLEKAMP (Mo.): Is there a difference in this black foul brood from the common foul brood?

MR. STEWART: The black brood as I said, appeared in New York State at first and differed materially from the old type of foul brood inasmuch as the brood dies just before it is being capped and we find very little dead under the capping; while with the black brood the greater per cent. dies under the capping. Foul brood is stringy and black brood is not, and the smell is different. The spread of the disease also differs; it spreads very rapidly. You will find that it has spread four or five miles away in the course of a few weeks, so that those things mark it as a distinct type of foul brood.

DR. BOHRER: I would ask if in feed-

ing the bees, after treatment, if you add any germicide to the food such as citric or salicylic acid or boracic acid?

MR. STEWART: We have used those things throughout the State and we recommend them to use those if they choose, although we never got any practical results from germicide fed in syrup. While it seemed to hold it in check we did not want our bee-keepers to rely on that as a cure.

MR. CARY (Mo.): I would like to know if the Cyprian bee is more immune from the disease than other bees?

MR. STEWART: We find that the Italians and some of the newer races of bees will stand the disease much more readily than the old time black. For instance we find yards where the vitality is very low from some cause and those yards would become ruined in a single season. I have seen a yard containing 60 colonies of bees with those bees weak in vitality, where fifty-nine of them were of this type of bee and one colony of Italians. The whole yard at the end of the season was dead and the one colony had everything full of honey and the sections were all filled, I don't know how many sets of them, and they never showed any trace of the disease; and this man being isolated somewhat and supposing this colony was sure to die with it let out all the wax in the solar wax extractor, before the bee inspectors had become organized. The result was that this colony continued about five or six years and it never showed any sign of the disease. I have noticed those bees that had a dash of Cyprian blood in them seemed to ward off the disease much better.

MR. CARY (Mo.): Do you mean in comparison with the Italians?

MR. STEWART: I am comparing them with the ordinary black bees throughout the country. You will find that farmer bee-keepers and some of

those called experts have black bees and rather poor hives and get started with Italians and they drift back and they have rather a poor class of hybrid and that class of bees succumbs readily to this disease, and we have asked all of the bee-keepers where any disease existed to replace them with either Italians or Cyprians or even Carniolans in preference to any of the black bees.

PROF. BENTON: How do Carniolans in this list compare with others?

MR. STEWART: We find the Italians will stand disease a little better than the Carniolans although we have never lost a whole apiary of Carniolans from this disease yet that I know of. My personal observation would indicate that some particular strains of Italian bees will stand it a little better.

MR. J. C. STEWART (Mo.): I would like to cite you a case similar to one you have been describing, where you said the larvae turned from a white to a yellow color. The larvae, we will say about two days before it should capped over, had begun to swell, and had formed a yellow spot on one side of the larvae about midway from end to end and in the center of the body, and that spot begins to enlarge and enlarge until it develops in nearly the whole body of the larva and this body has swollen so that as soon as you touch or puncture it it will burst and give off a watery substance. Do you consider that black brood?

MR. STEWART (N. Y.): It is pretty hard to recognize the disease from so meagre a description but I never found that in black brood. I don't know that I ever came across that particular feature. It would look more as though there were some pickled brood about it.

MR. WHITCOMB: You made some remark about ability to resist disease. Do you believe one colony has any more ability to resist disease than another or is it on account of the robbing

propensities? Some do not go out and rob so much and the hybrid black bees are always robbing.

MR. STEWART: At one time we did lean to that idea but we soon got our minds disabused. Take the instance I have just cited of the sixty colonies. My friend told me they could see that one colony gathering right in that yard and they showed no sign of the disease.

MR. WHITCOMB: Take it from generation to generation, and you put the honey under the microscope, and you will find that the disease is progressing.

MR. STEWART: If you talk to the bacteriologist you will find that honey is not a medium for the propagation and growth of bacillus alvei.

DR. MILLER: When black brood was first known it was considered a very terrible thing, and at this later date when they have had a chance to fight it I would like to know how they compare it with our foul brood. You would dread the affliction of the ordinary brood, now could you put it into per cent. as to your dread of your black brood.

MR. STEWART: It is pretty hard to compare the two because I have had so much more experience with the black brood than with the foul brood. While we occasionally find a little spot of it in New York State I have found foul brood where it has been on a couple of yards to an important extent for four or five years. If you had black brood in a single apiary of New York State it would largely depend on the weather or honey conditions how fast it would spread. It is a disease that thrives best in a starvation season when no new honey is coming in pure and fresh from the flowers; and the result is that I am a little at a loss to know how to place a percentage on it, but I should a great deal rather have the old time foul brood than the black brood.

DR. MILLER: Another question.

These two diseases, the scientists tell us, come from the same cause, bacillus alvei. One is puzzled to know why and yet we know that there are different types of the disease. But if they both come from the same cause do they merge one into the other? Will there be shades of it from one to another or are they distinct things, neither one ever changing into the other?

MR. STEWART: We have never known it to change from one to the other. It always preserves these peculiar characteristics of its own.

THE PRESIDENT: Is it not a fact that in the insect kingdom as well as the animal kingdom, and you take it among the human family, that the conditions surrounding all diseases have a very great deal to do with it? You find it sometimes in a light form and other times in a severe form and it is the condition in which the bees are and the surroundings.

MR. STEWART: Yes, I believe it is.

MR. ROOT: There is one fact that has not been brought out. I would like to ask Mr. Stewart whether he has diagnosed samples of black brood that have been sent to him from other portions of the country as the same as the black brood he has in New York State.

MR. STEWART: I had a sample brought from Michigan that I was at a little loss to know just what it was, while the sample was a little old, something over a week. It is pretty hard to take a little sample of it home and decide just what it is, especially after it has been out of the hive for a week or more, but I didn't hesitate in pronouncing this similar to our black brood in New York State.

Your General Manager has handed me a paper that was sent in by another inspector from New York State and perhaps it would be well to read that. The writer is W. D. Wright of Altamont, New York.

BLACK BROOD (so called) IN NEW YORK, VS. FOUL BROOD.

Contrary to the results obtained from former investigations and the general belief that the New York bee malady was an entirely new and distinct disease, the recent extensive investigations by New York State, exhibits are expected to prove that the disease prevailing here, is nearly, if not quite identical with that described by European authorities as foul brood, bacillus alvei.

There is apparently a variation in the exterior characteristics of the former from the latter, such as a greater proportion of the *unsealed* larvæ dying, consequently fewer sealed cases containing discarded matter, sometimes a black or yellow spot on the larva when first attacked, and only occasionally ropiness. In the advanced stages, either are extremely foul, and emit a nauseating stench. Also, either yields readily to the same treatment.

European bee-masters claim that there are two forms of foul brood, viz., the dry or mild and the moist or malignant. From their description, I believe the mild form tallies with what we call pickled brood, and the malignant probably the same as our foul brood or black foul brood.

I have observed for several years past, that the pure, three banded or leather-colored Italians were much less subject to the disease than other races, so that I universally recommend Italianizing with such strains. If this is done in diseased apiaries of black or hybrid bees, before or soon after treatment, the apiaist will stand a much better chance of banishing, or at least keeping the foul brood in subjection.

I was surprised recently, in referring to Quinby's bee-keeping edition of 1865, to find this statement in regard to Italian bees being less affected with foul brood. "Since their introduction into my apiaries, the number affected with this disease has diminished five-sixths." Mr. Quinby also states in his description

of the disease, that the dead larvae, was black. However, a larger proportion of them was sealed over than in our black foul brood.

I will also quote from Dzierzon's mode of treating foul brood, published in the *Bienenzzeitung* of 1857. He says, "To prevent the disease from spreading in a colony, there is no more reliable and efficient process than to stop the production of brood, for where no brood exists, none can perish and putrefy. The disease is thus deprived both of its ailment and its subjects. The healthy brood will mature and emerge in due time, and the putrid matter remaining in a few cells will dry up and be removed by the workers. All this will certainly result from a well timed removal of the queen from such colonies." This is recommended by the author when but few colonies are diseased, and those discovered early, but it is good practice even at the present day, and in the treatment of our black foul brood in certain cases, viz., colonies that we wish to treat by the formalin process, may be unqueened or the queen caged, then after the combs are free from brood, the honey may be extracted, the combs thoroughly fumigated, and returned to the bees after they have consumed the honey in their sacs. Also, any stocks that we may wish to brimstone at the end of the season, by removing the queen three or four weeks before the end of the honey flow, we will have no brood in the combs. They could then be extracted, fumigated with formalin and preserved for future use. The best results would be obtained from stocks of fair to good strength, as they would clean up the disease much better than weak ones.

For those who wish to preserve their apiaries as far as possible from the ravages of this disease, and do not wish to use the formalin treatment, the shaking process is recommended, stacking the brood, and shaking same combs again three weeks later.

In regard to the name of our present malady, will say that as everything emanating from *bacillus alvei* is regarded as foul brood, and a further addition to the title seems to be necessary to identify this particular phase of it, we may call it black foul brood. Because an error was made in the start in naming it black brood, is no reason why that title should be perpetuated.

The name was also very unfortunate for us when it was given, as it upset and rendered void the New York law as far as the prevailing disease was concerned, and necessitated an amendment at the next session of the legislature. However, we are happy to say that matters are gradually becoming righted.

With careful progressive apiarists, the outlook at the present time is quite favorable, even in districts where the mortality has been greatest, and the business has been conducted at a good profit.

MR. ROOT: I would like to make a statement from my knowledge of these two diseases. You perhaps remember about twenty odd years ago we had foul brood at Medina, and we had it very severely, and it was real foul brood; it roped and had all the characteristics, as given in the European Journals at the time. Now, this black brood departs itself in a very different way; it is not ropy, has a different odor altogether, is of a watery consistency, and when Mr. Thomas William Cowan, editor of the *British Bee Journal*, was at our place he examined the foul brood we had there; he had his microscope and looked at the *bacillus alvei* and said it was exactly the same thing as they have in Europe. Last summer I sent a sample of the foul brood that has been found in our vicinity to the bacteriologists in New York State and after an examination had been made of it a report came back that it was not the same thing as the black brood of New York State. That it was not *bacillus alvei*. There

are some things there that I do not understand. Thomas William Cowan examined the foul brood that I had seen and called it bacillus alvei; these bacteriologists examined that same thing and say it is not the same. I wish in the Department of Agriculture they could investigate that question and have it cleared up, there seems to be a conflict of opinion among authorities.

MR. JOHNSON (Ill.): In the last paper read the suggestion is made of shaking the bees and putting away the comb for three weeks. I would like to ask if it would be safe to use those combs again without purifying or cleansing.

MR. STEWART: I don't think he wished to convey the meaning that they were to be used again in three weeks but rather he speaks about stacking the brood and then afterwards when the combs are cleaned out to use formaldehyde on the combs. We cannot be sure of this treatment. In some cases it succeeds, in other cases it fails, perhaps owing to a poor grade of formaldehyde. Our experts have been making some tests of what has been sold on the market and find it is largely adulterated and therefore everybody did not get the same results. In regard to this other treatment we speak of, it is sometimes necessary in order to save the brood to a part of your colonies that are diseased early in the season while as the honey flow opens we treat the strong ones and stack the brood, the weak ones, and in perhaps ten days that makes the weak ones strong and you can shake those and you have bees enough to live and perform the labors of the hive until new brood is hatched.

PROF. BENTON: As a comment on what Mr. Root has brought up regarding the taking up of this subject I desire to say, shortly before coming here, I was asked to hand in estimates for the fiscal year for aparian work beginning July 1st, 1905, and in those esti-

mates I included an item of \$1,500 for an investigation of these bee diseases. It rests with you to see that that goes through. If it is received by the committees and congress, and if it passes we will employ a skilled bacteriologist and let him go to work to straighten the whole matter out. But this year, as Dr. Wiley indicated, there must be a united effort to see we get that in addition to our former appropriation.

MR. GILL: I want to enter a few words of caution to amateurs in this treatment of disease; our work goes out and it is dangerous for amateurs. Experts will do as they have a mind to and it is safe to let them, but I would advise any amateur attempting any fad in the matter of treatment when he has doctored his combs to make them into beeswax and when he has doctored his honey to either burn or destroy it. All the drugs in the hands of amateurs are not a success. When it comes to the treatment by shaking or driving be sure you do it a second time. The proper media for increase of the germs is in the larvae, the germ itself is in the honey and the danger lies in the honey. Bury it or burn it up. I am speaking for amateurs alone. I have had more experience with foul brood than I hope I will ever have to have again. I have had to treat from 25 to 150 cases every year, but it is getting less. I have apiaries that are entirely clear from it, and remain so and then in a year or two up comes some of it. You can have all the law and legislation you wish but we have got to contend with foul brood, the same as the human family must contend with typhoid fever. I believe there are sections of the country on account of the flora, soil, atmosphere or humidity that are more immune from disease than others. I have seen sections where it seemed hard to spread it and other places you couldn't keep from having it all the time. But it is safe at all times to the amateur to be sure of what he does. If in the fall you have had a bad

case, use fire; in the spring if you have got something worth saving, starve them pretty near to death, then put them on clean combs, then when the honey season comes, the best plan is to turn them into clean new hives, but be sure you know what you do with those old combs; take care of them and be careful and you will be rewarded.

DR. MILLER: I would like to ask Prof. Benton a question. He tells us it lies with us to secure so and so. Now, he supposes we common every day bee-keepers are smart enough to know all about what that means. I would like to have him say distinctly what he wants us to do.

PROF. BENTON: What I mean is simply this, that when the Bill which will go before Congress making appropriations for the United States Department of Agriculture has been reported, when it is the committee's hands, and then later on when it goes to the House and to the Senate for passage, every member should see that both of his Senators and the Representative from his district is touched up by a short letter to the point, stating we are interested in seeing work that affects our pursuit favorably considered by your committee. You need not say, we want ten or twenty thousand dollars but simply favorably considered; we wish to see our interests represented, and there are measures included in this Bill in which we are vitally interested; will you give them your support? Merely a touch up of that sort from all over the country, and particularly any member who is a member of the committee on Agriculture, would affect the purpose probably.

DR. MILLER: That is good so far as it goes. We don't know enough about these things we want to do. Would it be asking too much of Prof. Benton if he would, when some Bill comes up of that kind, tell us through the papers somewhat distinctly what we are to do.

PROF. BENTON: I will do that.

There is not only such legislation as that, but sometimes a Pure Food bill has been before Congress; it is a good thing to have that kept track of and it is a thing that every bee-keeper is interested in seeing passed and might influence very largely in matters of that sort. There are sometimes matters affecting the duties on honeys.

DR. MILLER: I think if Prof. Benton will do that it will help very largely.

MR. SMITH (Mich.): Along this same line and in view of the fact of the wide spread of these diseases over the country and the further fact that most of them are due to either carelessness or ignorance, would it not be a good thing to have a little leaflet issued on the prevention of these diseases. If there is none extant I would move we have a lot of them printed for the purpose of parcelling out among our members and distributing and for our local institutes throughout the country for distribution among the farmer bee-keepers.

MR. LOVESY: In my experience I have noticed a number of times that foul brood has turned to black brood. Just as soon as the bees commence brood rearing in the spring I go very carefully and look over the brood; pick off the caps of any I have any suspicion of and I often find the larvae in there. If that is the case I know it is going to be foul brood, pickled brood or black brood or something of that nature. Then we transfer them and put them into a box on the old stand and starve them for three or four days and put them upon starters and feed them up. In this connection in regard to foul brood laws, have something which affects you. Don't have a State law. There is no State in the Union that has any law at all that suits the other State. Our law reads that any five men in any county where the disease exists may petition the County Commissioners and they shall appoint and pay the inspector for the time he

occupies in his actual duties among the bees; and it provides he shall visit all bees. He is required to visit every apiary once a year. If there is anything wrong with the bees he attends to it, and if any time through the year a bee-keeper suspects something wrong with the bees he calls on the inspector and the inspector visits them.

DR. BOHRER: With regard to getting a new queen in such cases I would deem it entirely unnecessary because the germ of foul brood is found in the food in the stomach of the bee and so soon as the food has been disposed of and has passed through the system the queen is no longer liable to transmit that disease to her progeny.

I want to recommend to every bee-keeper with reference to foul brood that his cure be radical and permanent.

MR. KREBS: Some of us would like to hear about this bee paralysis.

MR. FRANCE: Bearing on this same line of foul brood perhaps I am wrong but I think not, the father of our authority in the United States from a practical standpoint is William McEvoy, of Canada. I went down to New York last winter more especially to meet him in council on this subject than any other, but Jack Frost beat me out and I failed to meet him. I said, "Be at this convention," but when the critical hour came he could not.

MR. REINECKE: Could the disease be carried by imported queens?

MR. FRANCE: This is a question of great importance both to queen breeders and the bee-keeper himself. Is there danger of foul brood by buying queen bees from abroad? Yes and no? I would not hesitate to buy all the queen bees a foul brood apiary had and introduce them into my hives provided when they came every queen was taken out of the cage and put into a new clean cage and fed sugar syrup forty-eight hours, and then introduced,

and then destroy the cage she came in. It is the food that is in the cage and not the queen.

MR. TAYLOR (Mich.): I think it is fourteen or fifteen years since I first had foul brood and I have been a good deal interested in it and have watched it and have not been terribly anxious to get rid of all of it as I like to see what can be done with the thing. At one time I had a good strong colony of bees that was queenless. I had another colony that had foul brood well developed and for the purpose of satisfying myself as to whether there was much danger of getting foul brood from a queen I took the queen out of the foul brood colony and put it directly into the healthy colony. They accepted her at once—I didn't have to cage her—and there was no foul brood ever developed from that operation, so that I am tolerably well satisfied that the danger of getting foul brood by means of a new queen is extremely slim.

MR. LAWS: I would like to ask Mr. France why he wishes to feed sugar syrup to the queen and bees in the cage for forty-eight hours before he introduces them?

MR. FRANCE: I would rather you would cut that off and not feed the queen and bees, and isolate her from those bees. It is simply to make her first consume what honey she has within her honey sack and then give her a good feeding, the same as with farm stock.

DR. BOHRER: The disease is no part of her system but simply what she has been eating.

MR. FRANCE: That is all.

DR. BOHRER: Do you consider salicylic acid as a germicide a valuable thing to feed with the syrup?

MR. FRANCE: I don't know but it would be good, but I have not known any bad results when we didn't use that.

MR. DARBY (Mo.): I would like to ask if you don't first introduce the

queen to a new escort before you do the feeding?

MR. FRANCE: Let her run into a cage alone first without those bees, to make sure she is partially starved, to get rid of that honey, then give her escorts and some feed.

MR. HART (Cal.): I would like to ask if it is not a good idea to feed the queen when you are treating for foul brood at times when the bees are not doing much?

MR. FRANCE: Yes, a most excellent time. You will accomplish two things at once. Only there is one danger. If you take away the brood it makes them restless and uneasy unless there is a good deal of feeding done. If there is a little swarming impulse it makes quite a difference. It is difficult to treat foul brood unless there is a natural honey flow coming in.

MR. HART: I would like to ask again if it would not be a better idea not to extract the honey from these two combs only at a time when the bees were doing well in the field?

MR. YORK moved, seconded by Mr. Krebs that when we adjourn this session it be a final session, even though it run to one o'clock or later. (Carried.)

MR. S. FRANCIS (Colo.): Does the queen bee ever deposit any honey in the cells and if not what difference will it make what kind of honey she has whether foul brood or not?

MR. FRANCE: I don't think she does, but sometimes she has an overload and she may feed it to somebody else that would. There is a little risk there. Keep on the cautious side.

MR. FRANCE presented the report on the National Honey Exchange of America.

MR. BROWN: With regard to this matter I would like to say that as you see this is the first step towards our National Commercial Organization, and, as was suggested in the paper read, it is to be a market for all of our

product; it is hoped to be the place where those who now consume honey and are seeking the produce from you, will come to this organization to buy. It is hoped that it will be so organized with such men at the head of it that every producer will have full and complete confidence in their management of it, and will willingly and freely trust and consign their goods thereto, knowing that they will get exact and just weight and exact and just returns, knowing too that if there be but one organization in the field which will manage and control and handle all this product, it will forever do away with the competition that now exists between localities, which has a tendency as all other competition does, to bear down the prices. Therefore we expect through this organization to be able to advance to the producer the price of his product, and not necessarily increase it to the consumer. I don't believe this matter will affect the price to the consumer one particle. It will simply save to ourselves and to those who sell and produce the honey that which now goes into the pockets of people that are making themselves wealthy out of what we produce.

For the inducement of those who wish to buy stock, the stock is placed at \$25 a share; and we expect, of course, to derive some benefit to be induced to buy stock, outside of this matter of boosting the price of our goods.

I can only outline something we are doing in California, having this last winter completed an organization in central California. This organization charges a commission for selling honey—it does not make any difference what that might be—we will say it is five per cent.—there are our resources and the dividends; after the expenses of the Association have been paid, whatever is accumulated will be dividends. We place our honey upon the market through this channel because we are members and we pay five per

cent. for marketing our own goods through this channel. It takes two per cent. of the five per cent. to meet our expenses, then there will be repaid a dividend of three per cent. back to ourselves on our stock. It can be proportioned to the amount of goods contributed as is done with us in California. Then we do not only get back the dividend or rebate on the goods we contribute but also on the entire gain of the Association. We had put in our charter a clause giving us an opportunity to manufacture and deal in supplies. That is simply put in there in case, after years of experience and growth we grow into something of that kind. But the first thing we want to direct our attention to is the market.

Mr. Krebs moved, seconded by Mr. Laws, that the report be accepted.

MR. ABBOTT: I rise to a point of order. This Association is discussing and passing action on the business of another Association which is a stock company and is to be entirely different from this Association and it seems to me a strange anomaly that there should be organized inside of this Association another financial Association whose avowed purpose is to crush the business of at least one fifth of this Association, for one fifth of the people here are supply dealers. I confess that this is the strangest anomaly that I have ever known to exist in the form of legislation, that I, as a member of the National Association, a supply dealer, should sit here and help make a Society whose avowed purpose is to crush out my business. I protest.

PROF. BENTON: I supposed this was an Association of honey producers to protect honey producers' interests and not an Association of supply dealers.

MR. ABBOTT: I have no personal reference to the matter. I believe in the courtesy of this Association being extended to these people to organize this Association, but I claim we, as

members of this Association, have nothing to say about how they shall conduct their business. I have no objection to what Mr. Brown has said or to the presentation of the matter or the organization of those here but now that it has become a permanent organization I claim it should hold its meetings separate and apart from us.

MR. WHITCOMB: While I have no interest in the sale of honey or supplies or anything of that kind yet I do consider when this Association goes into anything of the kind, or gives any countenance to it, it is treading on very dangerous ground indeed. If the people of California or Colorado wish to organize such an Association I have no objection whatever, but I object to dragging the people of Nebraska or Ohio or Missouri into an organization in which they have no interest.

DR. BOHRER: I do believe we have a right to recommend such an organization as will successfully combat the combines and trusts and such persons as wish to take stock have a right to do so.

MR. KREBS: I do not see any need of all this apparent opposition. This organization is intended to benefit the producer of honey and not to run in opposition to any class or clique of people. It is simply to get the benefit of the sale of honey at a reasonably good price without having to hunt all over the world to get our prices; it is just simply to regulate prices.

MR. DELONG: I really think it is the Association's business to procure a market for their product. If we spend the best efforts of our lives in producing a product and then put a great portion of that into the hands of untrustworthy men to handle and dispose of to the consumer, I think we have lost one of the important points of our mission.

We seem to be in the condition that we can produce the honey but when we have produced it another class of

people comes in that are not in the business at all, and they say, you shall not market your honey. I say we do market it. I say we agree on on this exchange and we see the destiny of our product.

PROF. BENTON: I think there is a good deal of misapprehension here. For my own part I would not think of going into any such organization as is spoken of if it were designed to crush the supply dealers, because they are a useful set of people and the supplies of these people must necessarily in the beginning come from these very supply dealers. They are not to be crushed, they are to be encouraged; they can form a part of it as well, and I see no antagonism. I do not see that the National Bee-Keepers' Association is the promoter or sponsor or anything of that sort for the honey producers' Association; this is simply a convenient place to bring forward such an idea.

MR. ABBOTT: I agree fully with Mr. Benton. We have got on common ground. I am not offering any objection. In fact I would like to amend the motion that we heartily concur in the movement and will offer no opposition to it in any way, but my contention is that this is a separate body and we ought not to take the time of this body. I leave it to Mr. Brown himself if I am not right.

Mr. Taylor called for the re-reading of the report which was complied with by Mr. France.

Mr. Taylor moved, seconded by Mr. Abbott, that the report be laid on the table.

The President put the motion, which on a vote having been taken was declared lost.

The President then put the motion to adopt the report which on a vote having been taken was declared carried, eight only voting against it.

Mr. York read a paper written by Mr. Poppleton, of Florida, on the subject of "Bee Paralysis" as follows:

BEE-PARALYSIS.

Early one season over 20 years ago, while keeping bees in northern Iowa, I noticed that many of my colonies seemed strangely affected, and in most cases seriously so. I examined leading text books, as well as our periodicals, but could find no reference whatever to anything like it. A sample of the affected bees was sent to Prof. Cook, but it was all new to him. About this time inquires commenced coming to our editors from various and widely separated localities about this same trouble. It came to be known as the "Trembling Disease," "Nameless Disease," afterwards as "Bee-Paralysis," which is more appropriate, and will probably be its permanent name.

The disease seems to be widespread, not only found in nearly all sections of our own country, but also in foreign lands. There is quite a general belief that it is confined to the South, but this is a mistake, as, with one exception, the most serious loss I have had from it was in northern Iowa. The fact that it is almost impossible to winter a diseased colony in the northern part of our country, prevents its becoming very serious there, and for that reason only it is more common in the South.

Is the disease contagious? If so, how, and in what way is it communicated from one bee to another, and from colony to colony, and, if not, what causes the disease, is one of the important problems yet to be solved. This problem must be solved, and correctly so, before we can fully control the disease. I am not at all sure I am right, but think the disease can be, and is, communicated from diseased bees to well ones. Careful experiments seem to prove that it is not passed along by means of combs, honey or brood, and I now transfer them from sick to well colonies without bad results, being careful not to give any sick, well or dead

bees from an infected colony to a well one.

Whether queens can and do transmit the disease to their offspring is one of the points not yet determined, and is, in my opinion, a most important one. Giving a diseased colony a new queen has not with me been a success, yet many facts which have been carefully observed lead one to the theory that queens are largely responsible for the spread of the disease, and it seems to me much more prevalent in certain strains or families of bees. One fall, some years ago, I purchased quite a lot of young queens from one of our best breeders. The following season, nearly all of the diseased colonies in my apiary were those to which one of these queens had been given, over half of them being affected. The breeder whose honesty and truthfulness cannot be questioned tells me that so far as he knew there was none of the disease in his apiary at the time he reared those queens. Another time I obtained two or three queens from one of the noted breeders in this country. There seemed to be no trace of the disease about them or their colonies at first, but part of them, and nearly every colony of their royal daughters, were diseased the following season. I had to purge the apiary of every trace of this strain. Same also occurred with another lot of purchased queens, while the descendants of other purchased queens have been free from the malady.

This question of the transmission of the disease through queens, and the fact that when once diseased the colony will continue so after a change of queens, looks as though queens and contagion both aid in spreading the disease, and opens up a wide field for theory and experiments.

The sign of disease is readily seen and recognized. Should any quantity of dead bees be seen outside the entrance to a hive, a few struggling and dying bees will usually be seen among

them. If not too badly diseased, well bees will be seen on the entrance board, tugging and hauling at sick ones, trying to drag them out of the hive. At first glance one may think that robber bees are being fought, but a little closer observation will show the plain difference between driving off robbers and dragging out sick ones that don't seem to want to go. On taking covers off of hives the sick bees will try to come to the light, and after a little time can be seen crawling on the tops of frames. Their motions are slow and laborious as though weak and partly paralyzed. They cannot take wing, but cling tightly by their feet to anything they are on. This tight clinging by their feet is the surest sign of the disease and very readily noticed.

The disease is exceedingly erratic in its course, sometimes commencing suddenly, sometimes slowly. It may destroy the colony in a few weeks or it may linger an entire season, or it may recover suddenly, with or without some seeming cause for doing so. This last trait has caused many who have seen only one or a few cases to conclude that they have found a sure cure because a colony happened to recover soon after something had been done. This erratic character of the disease has not only lead many to wrong conclusions, but makes it much more difficult to reach right ones. Observing scores or even hundreds of cases is necessary before coming to any definite conclusions at all, and we know too little of the disease yet to think we know very much about it at the best. Let us hope that some competent scientist can give us more definite knowledge than we now have.

Several methods of cure have been suggested, nearly all of which I have tried. None have given satisfaction except the use of sulphur. A single application of this has always affected a cure, except in two instances, when a second application was required. The

method of treatment was to go to to the colony to be treated some time during the day, and remove all the combs containing any eggs or unsealed brood, giving them temporarily to other colonies. In the evening as soon as all the bees are in from the fields, sprinkle all the bees, combs and inside of the hive very lightly with powdered sulphur, trying to get a little on all of the bees. I never measured the amount of sulphur used, but think about a tablespoonful to a small colony. Usually the bees will die off quite rapidly for a few days after treatment, then cease doing so quite suddenly. The original combs of brood taken away, or others, should be returned the day following treatment. Reason for having this brood out of the hive during treatment is because sulphur kills all unsealed brood that it touches. It is very important to observe this point in actual work.

While this treatment has always succeeded with me, yet I prefer an entirely different method. That, is to make a new nucleus with young queen, building this nucleus up into a strong colony by giving it the brood from the diseased colony, a comb or two at a time, as rapidly as it can use them to advantage. A cured colony is always very weak, so much so as to be of little or no value during the season of treatment. A nucleus built up by combs of brood from a sick colony will be in fully as good condition at the close of the season as would be a cured colony, with the added advantage of having a young queen with no known taint of the disease. While a cured colony is not apt to be again diseased, yet my experience makes me very shy about using the queens of such colonies for breeding purposes; and the best way of being safe from danger of that, is, not to keep such queens.

I hear reports of two other diseases known as "Bee-Paralysis" in the localities where they exist—one of them from

California, the other from Wisconsin. Whether these are really types of that disease or are new diseases, is more than I know. The existence of these in our country emphasises very strongly the need of thorough examination of the different types by competent scientists. I would suggest that our Association formally request the United States Department of Agriculture to take up this work and make a thorough investigation of these diseases.

Dr. Miller moved, seconded by Mr. Laws, that this Association request the Department of Agriculture to make the investigations suggested by Mr. Poppleton.

The President put the motion which on a vote having been taken was declared carried.

MR. LAWS: Is this a prevalent disease in our country now?

MR. ANDREWS: We very seldom have a year but we will have from one to five colonies diseased. It never got very extensive with us in southern California.

MR. FRANCIS (Colo.): In Colorado we have a great deal of this paralysis. It seems to affect the bees before the honey flow and when the honey begins to come in it disappears. But this season seems to be an exception. Nearly all my colonies show it. We have lost quarts and quarts of bees.

As a practical answer to the question as to the commonness of the disease Dr. Miller suggests that the members who are familiar with it arise, and at his response some twenty-five or more stood up.

MR. TAYLOR (Mich.): I have had a little trouble but exceedingly little. I have only had one or two cases. In the spring I had a colony troubled with disease and I removed the queen and gave the colony a new queen. When I removed the queen I put her in a cage and kept her for a few days till someone came along and wanted a queen. I said, I have no queens to sell; I

haven't any more than I want, but I have a queen here that I have just removed because the colony was diseased. If you want the queen take her along and try her. In the course of three or four weeks my bees were all free of the disease and my friend came back and told me his colony to which he had introduced the queen had contracted the disease; showing that the queen had something to do with the disease.

DR. BOHRER: How long after the introduction did they contract it?

MR. TAYLOR: Four or five weeks.

PROF. BENTON: My own experience had been very limited but it has been reported to the Department of Agriculture from a good many States, principally Texas, Colorado, California, Florida and Pennsylvania. I recall those now, and there are others. It was particularly virulent in Texas, Colorado and California.

DR. MILLER: There is one question that come up with regard to this which possibly might throw a little light on the treatment of the disease. In general the disease is not bad. I have had the disease many and many a time and I do not mind it at all; it doesn't amount to anything. Down South it is a very serious thing. Why is it so much worse in the South than in the North?

MR. POPPLETON: I had the disease fully as malignant in the North, in northern Iowa as I ever had it in the South. The first winter it came the old bees continued dying all the time and continued for several months with no new brood being raised. Of course, with the old dying all winter, before the spring comes, there were no bees, and the disease cannot be distributed further. I know of no other reason why it has been so. The only difference in the South is with the weather; there it continues year in and year out and there is no interval of brood rearing.

MR. FRANCE: I found another trouble that so closely resembled bee-par-

alysis that some of us may get conflicting ideas. I found it in Wisconsin and by reports I learned that there is the same thing in Missouri, Illinois and Iowa and straight on through to New York, and almost at identically the same time of the year. The characteristic points of it are, first, we see a swarm that is unusually strong, and in three days' time it has depopulated from half to two-thirds of all the bees, both young and old bees leaving home. On close examination out in the grass from two to six and sometimes twenty feet away we find here and there a bee running as if something was after it. It comes to a blade of grass and tries to climb it and makes an effort to fly and falls down again. With paralysis there is more of a tendency as it travels to travel slower and more with a shaky motion to the body. These do not seem to have time to shake. The seriousness of it is it simply depopulates the whole hive, so much so that in an apiary a little way north of me there was at least a half or more of all the bees, in three days' time, gone, just at the opening of the honey flow. It recovers itself in a few days, as fast as the brood can hatch out, and it reappears again right in the basswood flow. After finding it in some of those northern yards I returned to my own bees confident they were all right, but I found it very much all through, and I kept on going and going and seemingly there was no limit to it in our State. It was the same thing. Before I got around the circuit it was all over with. The first yard I went to I understood Mr. Benton sent a man out there to investigate, but by the time word could get to him and the man was sent out there, it had quit. But we will be on the alert and watch for it. To say what caused it I could not say anything in particular. I took a bee and put it under a glass, and I could not see any parasitic trouble, and I am at

a loss to know what to call it, for I hardly feel like calling it paralysis.

MR. DAVIS (Iowa): I did not rise when you asked us because I didn't have the trouble just as you describe it, but Mr. France has described the trouble that I find in my apiaries in southern Iowa. I didn't know what caused it.

PROF. BENTON: There is one point perhaps that Mr. France has failed to mention. That this case in Wisconsin could not be ascribed at all to spraying. As Mr. Rankin was in western Michigan, I requested him before coming to Washington to go across to Wisconsin to see what he could there. He arrived a little late; the disease seems to disappear so suddenly. He investigated the surroundings and he was confident it was not due to spraying. It was not foul brood; it was not ordinary paralysis, but there were such peculiar conditions we should have to conclude it was some form of paralysis. There is where we have to take it up another year and make a thorough investigation to see the cause of it. He could only make one single suggestion, and that is a mere idea that entered his head, that possibly between pear blight and this disease there is some connection, because pear blight was abundant about this apiary that was so largely affected. If any one is situated to make observations of that I shall be glad to report on it another year.

MR. HART (Cal.): I would say our fruit men do their spraying in February and the early part of March and this paralysis comes on between the 30th of August and 10th of September. We have what has been spoken of by Mr. France, and also in addition to that when the bees die they seem to be full of sour watery stuff.

No. 152: I have had some trouble in Colorado, and Prof. Benton's suggestion that it might be pear blight in connection with paralysis reminds me

that the worst trouble I had was with bees setting in a pear orchard which was badly affected with blight. I hadn't thought of connecting the two diseases, but perhaps that had something to do with it. It occurs with me usually about the first of May and continues until October. Mr. France's description of the disease is identical with my experience. I have eradicated it in some few cases by changing the queens, but I don't think it is a reliable remedy.

MR. FRANCE: In reply to Mr. Benton, I also looked after the spraying conditions north of me. Now in my own locality I had four pear trees and that is all I know of, within several miles of my apiary, and there were none near my out-apiaries, and they were fully as bad as the others. About twenty miles almost directly west of this yard in Wisconsin, where Mr. Rankin went, it was fully as bad, and there are no pear trees in that vicinity. I question if we dare attributed it to that. I don't believe spraying has anything to do with it.

MR. ROOT: Mr. France describes exactly what I have seen in various parts of the country, and what I have seen in our own locality, but usually after the honey flow. I have seen one other peculiar symptom accompanied with it, that was that the bees would be tugging at their abdomen with their hind legs, and after struggling for some time they would separate the abdomen from the rest of the body, and they would be running around in that way. I have seen them come down in the air head over heels in that way, and apparently had made the separation in the air. I have seen the separation take place on the sidewalk, and I have watched them actually dismember themselves, apparently as if in a good deal of pain. I sent a few specimens to Mr. Benton, and if I remember rightly, Prof. Wiley found a slight trace of poison. Whether they had

gathered anything that poisoned them or not I cannot say.

MR. POPPLETON, (Fla.): Mr. Law was asking about the prevalence of the disease. You cannot pick up a single volume of any of our bee papers but what you will find reference to it. I get letters from different States in the Union asking about it. Mr. Ford lost his entire apiary, and another gentleman down in Florida almost went out of business. It is scattered universally. The form I speak of is exactly identical with what I had in Iowa. I think Mr. Benton tells me they call it the May disease in Europe because it is more prevalent then. It is spoken of in the Australian Journals. It cost me 10,000 pounds of honey one year; it costs me a little something every year; it is costing now a great deal. It is exceedingly erratic in its operations. You cannot tell anything about it; it seems to respond to one kind of thing at one time and to another at some other time. My own impression is that one of the worst troubles is through the queen, and I have entirely refrained from ordering a queen from outside of my apiaries, because of the danger of bringing it in. Not with the queens themselves, but their progeny. The more experience we have with it the more we know we don't know about it.

MR. KREBS: I have talked with a very prominent bee-keeper of Texas on the subject of paralysis, and he told me he could not figure it out in any sense, and all he did for it was simply to wait until the honey flow commenced. It is a spring disease, and when the honey flow comes it passes off. It will come back the next spring in some cases and in others it does not.

MR. STEWART, (Ill.): There are many here vitally interested in the subject of foul brood, and in a private interview with Mr. C. Stewart of New York he has outlined a treatment that has not been touched upon at all and

if we ask him he would take the floor and describe his treatment. It is a treatment to be carried on this fall.

MR. WHITCOMB: Among swine breeders there are about twenty or thirty different kinds of diseases which we attribute to cholera. Among cattle we know they go out and get something that kills them. We attribute all these diseases that bees are heir to to bee paralysis which we do not attribute to foul brood. Now we need to understand ourselves and define what it is. I have had two cases. The first case I superseded the queen and I gave her a couple of colonies and she built up the finest colonies I ever saw. The next had shown symptoms of cobaltic poison and I went over to a friend and found he had left some honey in the cellar, and the flies were there and he had given them fly poison. Sometimes they bring in poison from the fields. We don't know anything about it.

MR. POPPLETON: The idea that it comes on just before the honey harvest, and goes away just as soon as it is over, is only partly true. There is always more of it just before the honey harvest; when the honey flow fairly commences it lessens, but some will carry it right straight through the honey harvest. There is not any one rule to follow at all. There is one disease that is known universally as bee paralysis.

MR. C. STEWART: Perhaps in giving that treatment I ought to say sometimes the question is brought up about changing the hives. We treat those bees right in the same hive, providing you don't leave any comb or honey there. Some of our people have gathered up the refuse from a hive badly affected with black brood and sent it to our bacteriologist at Cornell University, and he was unable to obtain a culture from it, showing there were no living germs after it reached him.

With reference to the treatment I

was asked to give it is, at the end of the honey season when all brood rearing has ceased—depending on where you are located—when there is no brood in the hive you can take all the combs from the diseased hive and give them a clean set of combs from some healthy hive, and when the spring comes you will find that the disease has disappeared, there being no brood there to continue the disease and there being no honey except what little they take in their honey sacks with them and that being consumed before the brood is reared again you will find the colony in nice shape.

MR. POPPLETON: The most important part in my entire paper, not one has touched on, and that is the method of curing bee paralysis by transferring the brood and building up another healthy colony. I think that will be far more satisfactory. It has the advantage of ridding the apiary from all signs of the disease.

THE PRESIDENT: It is almost utterly impossible for me at this time to name a committee of two from each State interested in bee culture, but through the Bee Journals, it may be well at no distant date to take this up and correspond with both the President and the others and make suggestions and I will then forward the committee to the Manager and he will notify these people who have been appointed, so that they will be ready to do their duty.

MR. HAINES, (Ill.): I would like to have some of the experts explain the treatment of pickled brood.

MR. C. STEWART: I am not so well posted on that as I am on black brood. We have a disease near Syracuse; it differs a little from the old-timed pickled brood that was pickled in its own juice. This seems to have dried down, and when the proper time comes for the larva to be capped over it simply straightens out in the cell and the head turns black, and to distinguish it

we call it neglected brood, because we find a great deal of it in the time of a drouth, when honey is coming in very slowly. We find apiaries badly depleted to a great extent, that is the most trouble we have had with pickled brood in New York State.

MR. DAVIS, (Iowa): I think pickled brood troubles only black German bees. I have been troubled somewhat with it. I don't think it is serious at all. It is like the bee moth. By introducing the Italians bees it will disappear almost entirely.

MR. HAINES, (Ill.): I have to differ from the gentleman on that. I have as good an Italian queen as you would wish to see; there are two hives that have swarmed from that last year and they are both affected with it. Mr. France examined some yesterday from St. Clair County, and pronounced it pickled brood, and he says it will dwindle down until there is no brood at all. That is my experience. I don't say we have much foul brood but we are just as bad off with pickled brood.

No 159: I was badly scared over this business this year myself. I found it in one of my apiaries and in very bad shape; found it had depleted two-thirds of the combs in the hive; the hive would be affected all over and in perhaps a very bad shape, two-thirds of it would be entirely destroyed. I wrote to the President of our National Association and he told me that they needed protection and feed. I went to work and contracted the entrance to my hives. I had them on the Miller bottom board and the entrance wide open. I contracted the entrance and I fed liberally and the disease has entirely disappeared. I also went to an apiary where there were Italian bees, and I narrowed the entrance to those hives, and shut them down where they were warm, and fed them with sugar syrup, and the disease has entirely disappeared.

No. 152: In my experience with this pickled brood I believe it to be black brood in its incipiency. From the causes given by most of the experts on pickled brood they tell us that it becomes so by being neglected. I found it in Colorado with a little honey and I found it in medium colonies with a little honey and in those that have plenty of honey; I found it in the honey flow and I found it in the very strongest of colonies, exactly what Mr. France showed me yesterday, and said it was pickled brood, and he gave me a very severe look when I told him it was black brood. I followed a case down from just one or two cells of so-called pickled brood in the apiary till you could see it develop into the most malignant case of black brood in all stages, from very few cells to others entirely dead from disease. I think the locality must have something to do with it.

MR. STEWART (Mo.): This gentleman stated that his bees recovered after they began to feed. I would like him to state if the bees had plenty of honey in the hive at the same time?

No. 159: Yes, but it was sealed honey.

MR. STEWART (Mo.): I believe bees can uncap honey about as well as anybody else. I have had thirty cases of this pickled brood at one time in New York. I had it once last year and again this year; about five cases this year; and at no time have my bees been short of feed, and I have not fed anything to help them get rid of the disease, nor did I kill a single queen, and for three years previous to that I fought foul brood hammer and tongs, night and day, in fifty or sixty colonies. I know it has no connection with foul brood whatever. I know these thirty colonies have had pickled brood and they got well and I never lifted a finger to help them in any way.

MR. C. STEWART (N. Y.): I don't think you will find that pickled brood

will ever develop into black brood or foul brood. The conditions that prevail may be as favorable to the development of black brood as of pickled brood.

MR. RHEES (Utah): I have had some experience with pickled brood. Some four or five years ago I got quite alarmed. Invariably they got low during the season. I came to the conclusion that pickled brood was simply the death of the larvae. I understand it is caused by some life that grows in the matter that is decaying. Nearly all diseases are caused by some kind of life. I believe when the conditions are favorable to pickled brood they have it. When feed is poor or the weather cold, or the bees cannot get water, or something that is needed to feed this young larvae, it dies. When conditions are favorable in the hive the percentage of death is small, and the bees pull them out before we ever see them at all. I believe the larvae dies in our colonies; if the larvae is removed immediately we do not see any pickled brood. If they die in large quantities we commence to be alarmed at the situation. In some instances where the vitality of the queen is very low and a colony gets to the hives, and the brood is already started, the bees get behind and they cannot catch up, and the disease will finally kill the colony in some instances. I do not believe pickled brood is contagious in the same sense as foul brood. The only way we can cure it is by keeping the vitality above it and the conditions of the bees good.

THE PRESIDENT: As your presiding officer I do not know that in my life I have ever felt prouder to preside over a deliberative body of ladies and gentlemen than I have this one. It has been one of the most harmonious meetings I have ever experienced in all walks through life. We are all stars in the universe, some shine brighter than others. We may not all walk on

paths of flowers, some of us have thorns in those paths and walks in life, but by our goodness, and by casting aside our selfishness, we live to better the conditions of one another. I should say to you here that the saddest time I have is when I say good bye to those I have been associated with in a meeting of this kind, and when today I say farewell to you, it is not a farewell forever, because I expect to meet many of you again. But for the next year many of those who may be here—I hope not—will go over to their last home on the other side of the river, and I hope before you leave you will have a hearty hand shake, you will come in touch with one another and get down to that point in life where good christian people get—while I may not be one of them, I believe in it—that you may assemble together and do unto others as you would have them do unto you. That is the proper thing in life. Do not, when you go away, from here, fix up your little slates for the next officers; look at this from a sincere busi-

standpoint; do your duty. If anyone writes you a circular, use your own judgment, and then in the future you will have an organization that will not not go on in a selfish channel for one or two cliques that may be there, but for the whole interest, for the whole bee fraternity of the United States. Always bear this in mind, and you will have done a good thing in life. Ladies and gentlemen, I thank you. (Applause.)

I want to say another word in conclusion. Do not forget your bee papers that you may get proper education. They do much to buildup your industry.

MR. TAYLOR (Mich.): If there is no other business I move the convention adjourn sine die

MR. KREBBS (Tex.): I second the motion.

The President put the motion, which on a vote having been taken was declared carried, and the convention adjourned at 12:30 o'clock p. m.



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